GRUNDIG

Service Manual

TV

CUC 2059 D

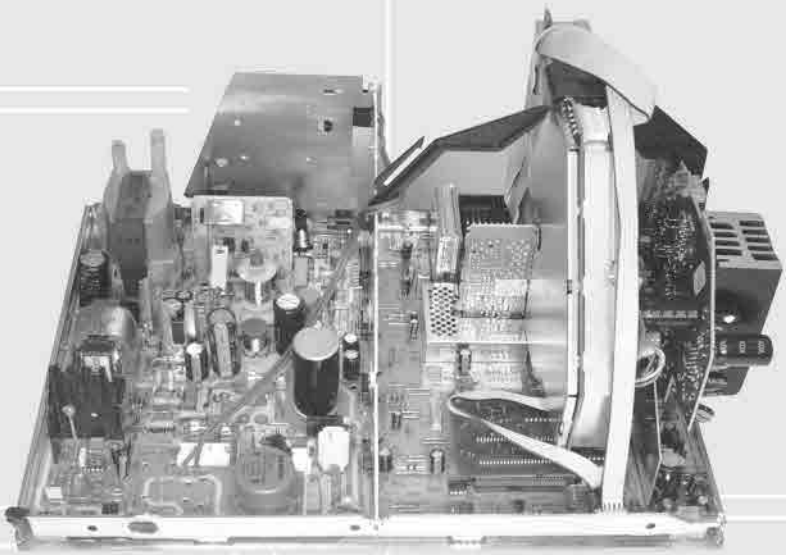
ARGANTO 70
MW 70 – 500 IRDT
(G.CI 3952 GB / VNM)

ARGANTO 70
MW 70 – 505 IRDT / DPL
(G.CI 4052 GB / VNM)

CUC 2058 D

ARGANTO 82
MW 82 – 500 IRDT
(G.CI 3752 GB / VNM)

ARGANTO 82
MW 82 – 505 IRDT / DPL
(G.CI 3852 GB / VNM)



Zusätzlich erforderliche
Unterlagen für den Komplettservice

Additionally required
Service Documents for the Complete Service

Service Manual	Service Manual	Service Training
CUC 2058 D CUC 2059 D	Sicherheit Safety	CUC 2000
Materialnr./Part No 72010 025 9000	Materialnr./Part No. 72010 800 0000	Materialnr./Part No. Ⓓ 72010 350 3500 GB 72010 350 3600

Btx * 32700 #

Materialnummer
Part Number 72010 025 9000

Änderungen vorbehalten
Subject to alteration

Printed in Germany • WÜ
E-BS 38 0799
8002/8012 (GB)

http:\\www.grundig.de

Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Materialnummer 72010 800 0000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010 800 0000, as well as the respective national deviations.

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Allgemeiner Teil

Meßgeräte

Beachten Sie bitte das Grundig Meßtechnik-Programm, das Sie unter folgender Adresse erhalten:

General Section

Test Equipment

Please note the Grundig Catalog "Test and Measuring Equipment" obtainable from:

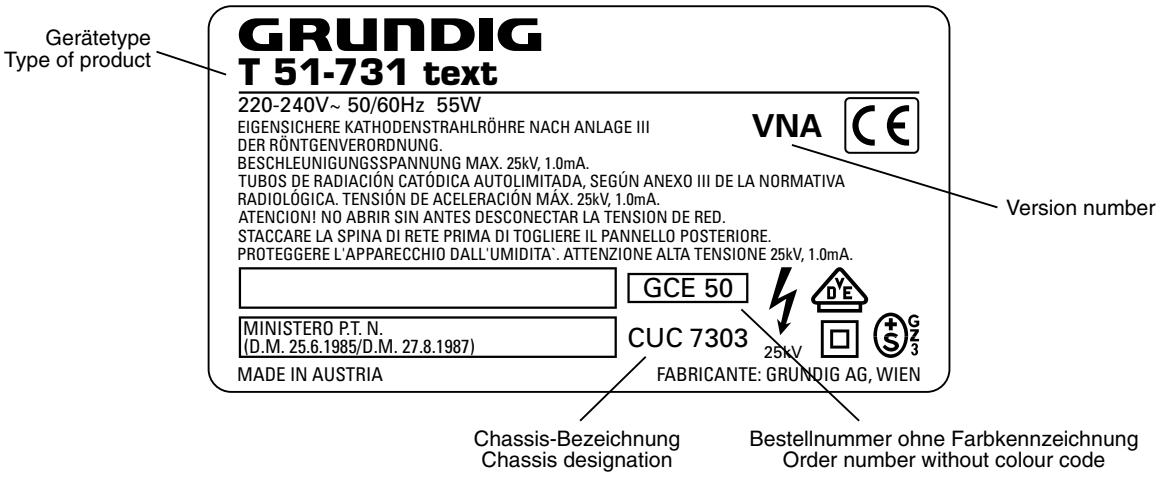
Grundig AG
Geschäftsbereich Instruments
Test- und Meßsysteme
Würzburger Str. 150
D-90766 Fürth
Tel.: 0911 / 703-4118
Fax: 0911 / 703-4130
eMail: instruments@grundig.de
Internet: http://www.grundig-instruments.de

Typenschild des Gerätes

Zusätzlich zum Gerätetyp und der Chassisbezeichnung enthält das Gerätetypenschild künftig eine sogenannte "Version number" z.B. VNA. Diese Kennzeichnung gibt Aufschluß über den technischen/ mechanischen Fertigungsstand.
Für die Bestellung von Ersatzteilen sind deshalb folgende Angaben unbedingt erforderlich:
- Gerätetype (z.B. "T 51-731 text")
- Chassis-Bezeichnung (z.B. "CUC 7303")
- Version number (z.B. "VN**A**")
- Materialnummer des Ersatzteils

Type Label on the set

In addition to the type of the TV set and the designation of the chassis, a so-called "Version number", e.g. VNA, is printed on the type label. This identification gives information on the technical/mechanical state of production.
Do not fail to give the following particulars when ordering spare parts:
– Type of product (e.g. "T 51-731 text")
– Chassis designation (e.g. "CUC 7303")
– Version number (e.g. "VN**A**")
– Part number of spare part



Modulübersicht / Module List

	Materialnr. Part Number	**ARGANTO 70 MW 70-500 IRDT CUC 2059 D (VNM)**	**ARGANTO 70 MW 70-505 IRDT/DPL CUC 2059 D (VNM)**	**ARGANTO 82 MW 82-500 IRDT CUC 2058 D (VNM)**	**ARGANTO 82 MW 82-505 IRDT/DPL CUC 2058 D (VNM)**
Bestell-Nr. Order No.		G.CI 3952 GB	G.CI 4052 GB	G.CI 3752 GB	G.CI 3852 GB
Chassis		29704 003 8600	29704 003 8700	29704 003 8800	29704 003 8900
Tuner PLL	29504 301 0100	●	●	●	●
Keyboard	29501 083 8300	●	●	●	●
Bildrohrplatte CRT Panel	29305 122 2500	●	●	●	●
Prozessorplatte Processor Board	29305 219 1300	●	●	●	●
Netzschalterplatte Main Switch Panel	29305 165 8300	●	●	●	●
Panorama View	29305 129 0400	●	●	●	●
YUV-Interface-Platte YUV Interface Board	29305 129 0600	●	●	●	●
IRDT-Baustein IRDT Module	29504 207 0100	●	●	●	●
Buchsenplatte Socket Board	29305 160 6300	–	●	–	●
nachrüstbar retrofittable	29305 160 6300	●	–	●	–
Dolby-Surround-Platte Dolby Surround Board	29504 104 8500	–	●	–	●
nachrüstbar retrofittable	29504 104 8500	●	–	●	–
NF-Verstärker AF Amplifier	29504 104 8400	●	–	●	–
TP 815 C	29642 061 1400	●	●	●	●

Technische Daten / Technical Data

	ARGANTO 70 MW 70-500 IRDT CUC 2059 D (VNM)	**ARGANTO 70 MW 70-505 IRDT/DPL CUC 2059 D (VNM)**	**ARGANTO 82 MW 82-500 IRDT CUC 2058 D (VNM)**	**ARGANTO 82 MW 82-505 IRDT/DPL CUC 2058 D (VNM)**
Bildröhre / Picture Tube				
Sichtbares Bild Visible picture	66cm	66cm	76cm	76cm
Bildschirmdiagonale Screen diagonal	16:9, 70cm (28") Videocolor, Super Flat , Black Line Invar	16:9, 70cm (28") Videocolor, Super Flat , Black Line Invar	16:9, 82cm (32") Videocolor, Super Flat , Black Line Invar	16:9, 82cm (32") Videocolor, Super Flat , Black Line Invar
Ablenkwinkel Deflection angle	104°	104°	104°	104°
Bildwechselfrequenz Vertical frequency	50Hz	50Hz	50Hz	50Hz
Elektronik / Electronic				
Programmspeicherplätze Programme positions	Analog 99 TV / Digital 99 TV + 3 AV	Analog 99 TV / Digital 99 TV + 3 AV	Analog 99 TV / Digital 99 TV + 3 AV	Analog 99 TV / Digital 99 TV + 3 AV
AV-Auswertung AV evaluation	auf jeden Programmplatz programmierbar / programmable for every programme position			
Tuner	PLL-Frequenz synthesizer tuning UHF/VHF (global pinning) PLL frequency synthesizer tuning UHF/VHF (global pinning)	PLL-Frequenz synthesizer tuning UHF/VHF (global pinning) PLL frequency synthesizer tuning UHF/VHF (global pinning)	PLL-Frequenz synthesizer tuning UHF/VHF (global pinning) PLL frequency synthesizer tuning UHF/VHF (global pinning)	PLL-Frequenz synthesizer tuning UHF/VHF (global pinning) PLL frequency synthesizer tuning UHF/VHF (global pinning)
TV-Normen TV-Standards	PAL, NTSC 4,43MHz, I	PAL, NTSC 4,43MHz, I	PAL, NTSC 4,43MHz, I	PAL, NTSC 4,43MHz, I
Stereo Systeme Stereo systems	Nicam 6,52MHz	Nicam 6,52MHz	Nicam 6,52MHz	Nicam 6,52MHz
Videotext / Digital MHEG Teletext / Digital MHEG	8 Seiten TOP/FLOF-text, VPS, WSS 8 pages TOP/FLOF-text, VPS, WSS	8 Seiten TOP/FLOF-text, VPS, WSS 8 pages TOP/FLOF-text, VPS, WSS	8 Seiten TOP/FLOF-text, VPS, WSS 8 pages TOP/FLOF-text, VPS, WSS	8 Seiten TOP/FLOF-text, VPS, WSS 8 pages TOP/FLOF-text, VPS, WSS
Musikleistung (ohne Dolby) Music power (without Dolby)	Stereo 2 X 15W, Subwoofer 30W	Stereo 2 X 15W, Subwoofer 30W	Stereo 2 X 15W, Subwoofer 30W	Stereo 2 X 15W, Subwoofer 30W
Musikleistung (mit Dolby Prologic) Music power (with Dolby Prologic)	—	Stereo 2 X 15W L/R, 30W Center, 15W rear, 30W Subwoofer,	—	Stereo 2 X 15W L/R, 30W Center, 15W rear, 30W Subwoofer,
Anschlüsse Front / Connections Front				
Kopfhörer Headphones	Stereo 3,5mm Klinkenbuchse, Lautstärke regelbar, individuelle Tonkanalwahl bei 2-Ton-Empfang Stereo 3.5mm jacksocket, adjustable volume, individual channel selection with dual-sound broadcasts			
Video IN	1 x Cinch	1 x Cinch	1 x Cinch	1 x Cinch
Audio IN	2 x Cinch	2 x Cinch	2 x Cinch	2 x Cinch
Anschlüsse Rückwand / Connections Rear Panel				
Euro AV 1 (schwarz/black)	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input
Euro AV 2 (schwarz/black)	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input
Interface	RS 232, RJ 11 Modem*	RS 232, RJ 11 Modem*	RS 232, RJ 11 Modem*	RS 232, RJ 11 Modem*
Netzteil / Mains Stage				
Netzspannung (Regelber.) Mains voltage (variable)	165…265V	165…265V	165…265V	165…265V
Netzfrequenz Mains frequency	50 / 60Hz	50 / 60Hz	50 / 60Hz	50 / 60Hz
Leistungsaufnahme Power consumption	ca. 100W	ca. 110W	ca. 105W	ca. 120W
Standby aktiv / passiv Standby active / passive	ca. 65W / ca. 6W	ca. 65W / ca. 6W	ca. 65W / ca. 6W	ca. 65W / ca. 6W

* GENEHMIGT für den Anschluß an die in der Bedienungsanleitung genannten Telekommunikationssysteme unter den darin genannten Bedingungen.

610107

* APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them.

Sicherheits-Hinweise

Die in den Fernsehgeräten auftretende Röntgenstrahlung entspricht den Bestimmungen der Physikalisch-Technischen Bundesanstalt vom 8. Januar 1987.
Die Hochspannung für die Bildröhre und die damit auftretende Röntgenstrahlung ist abhängig von der exakten Einstellung der Netzteilspannung +A.
Nach jeder Reparatur im Netzteil oder in der Horizontalablenkung ist die Hochspannung zu messen und ggf. einzustellen.
Schutzschaltungen im Gerät dürfen nur kurzzeitig außer Betrieb gesetzt werden, um Folgeschäden am Chassis oder an der Bildröhre zu vermeiden.
Beim Austausch der Bildröhre dürfen nur die in den Ersatzteillisten vorgeschriebenen Typen verwendet werden.

Safety Advices

The X-radiation developing in the sets conforms to the X-radiation Regulations (January 8, 1987), issued by the Physikalisch-Technische Bundesanstalt (federal physiotechnical institution).
The high tension for the picture tube and thus the developing X-radiation depends on the precise adjustment of the +A power supply.
After every repair of the power supply unit or the horizontal deflection stage it is imperative that the EHT for the picture tube is checked and re-adjusted if necessary.
To avoid consequential damages to the chassis or the picture tube the integrated protective circuits are allowed to be put out of operation only for a short time.
When replacing the picture tube use only the types specified in the spare parts lists.

(D)

Servicehinweise

Chassisausbau
Bevor Sie die Chassis-Verbindungsleitungen lösen, muß die Leitungsverlegung zu den einzelnen Baugruppen wie Netzschalterplatte, Bedieneinheit, Bildrohrplatte, Ablenkeinheit oder Lautsprecher beachtet werden.
Nach erfolgter Reparatur ist es notwendig, die Leitungsführung wieder in den werksseitigen Zustand zu versetzen, um evtl. spätere Ausfälle oder Störungen zu vermeiden.

Netzkabel
Diese Geräte dürfen nur mit dem Original-Netzanschlußkabel mit integrierter Entstördrossel betrieben werden. Dieses Netzkabel verhindert Störungen aus dem Netz und ist Bestandteil der Gerätezulassung. Im Ersatzfall bestellen Sie bitte ausschließlich das Netzkabel laut Ersatzteilliste.

(GB)

Service Notes

Disassembly of the chassis
Before disconnecting the chassis connecting leads observe the way they are routed to the individual assemblies like the mains switch panel, keyboard control panel, picture tube panel, deflection unit or loudspeaker.
On completion of the repairs the leads must be laid out as originally fitted at the factory to avoid later failures or disturbances.

Mains cable
The TV receiver must only be operated with an original mains connecting cable with an interference suppressor choke integrated in the mains plug.This mains cable prevents interference from the mains supply and is part of the product approval. For replacement please order exclusively the mains connecting cable specified in the spare parts list.

(F)

Information pour la maintenance

Dèmontage de chassis
Avant de défaire les connecteurs du châssis princip, il y a lieu de repérer auparavant les liaisons correspondant à chaque platine comme par exemple le C.I. Inter secteur, le C.I. Commande, le C.I. Tube, le bloc déviation ou les haut-parleurs.
A la fin de l'intervention, les connexions doivent être remises dans leur position d'origine afin d'éviter par après d'éventuelles défaillances ou perturbations.

Cable dereseau
Ces appareils ne peuvent être utilisés qu ' avec un cable de connecion original de réseau avec bobine antiparasite intégré dans la fiche de secteur. Ce câble de réseau empêche des perturbations de réseau et est partie de l'autorisation d'appareil. Si nécessaire commandez uniquement le cable de réseau selon la liste de pièces détachées.

(I)

Nota di servizio

Smontaggio del telaio
Prima di sfilare i cavi di collegamneto col telaio è necessario osservare la disposizione originaria degli stessi verso le singole parti come la piastra alimentazione, l'unità comandi, la piastra cinescopio, il giogo o l'altoparlante.
Dopo la riparazione è necessario che gli ancoraggi e le guide garantiscano la disposizione dei cavi analogamente a quella data in fabrica e ciò per evitare disturbi o danni nel tempo.

Cavo rete
Gli apperechi devono essere messi in funzioni solo con il cavo originale il colle gamento di rete e la sua spina di rete deve essere munita di una bombina d´induttanza. In causa di sostituzione ordinate solo il cavo di alimentatore che corrésponde alla lista degli accessori.

(E)

Nota de servicio

Desmontaje del chassis
Antes de desconectar las conecciones del Chassis hay que observar la dirección de dichas conecciones a los distintos grupos de construcción como la placa de conmutación de red, unidad de control, placa del zócalo del tubo de imagen, unidad de deflección o altavoces.
Después de haber realizado la reparación y para evitar fallos o pertubaciones posteriores es necesario reponer las conecciones tal como fueron instaladas originalmente en fabrica.

Cable de red
El aparato solo se puede usar con el cable de red original con choque antiparásito integrado en el enchufe de red. Este cable de red evita perturbaciones de la red y es parte de la autorización del aparato. En caso necesario puede pedir el cable de red según lista de piezas de repuestos.

(D) Schaltplansymbole (GB) Circuit Diagram Symbols (F) Symboles schéma

(I) Simboli sullo schema (E) Simbolos en los esquemas

▷▷+	Feinabst. + / Fine tuning + / Réglage fine + / Sint. fine + / Sint. fina +
- ◁◁	Feinabst. - / Fine tuning - / Réglage fine - / Sint. fine - / Sint. fina -
	Lautstärke / Volume / Volume / Volume sonore / Volumen
REF	Referenz Lautstärke / Volume ref. volt. / Tens. de réf. vol. sonore / Tens di rif. volume / Tens. ref. volumen
	Balance / Balance / Balance / Balanciam. / Balance
	Suchlauf / Self seek / Recherche autom. / Sint. autom. / Sintonia automatica
	Farbton / Tint / Teinte / Tinta / Tinte
	Helligkeit / Brightness / Luminosité / Luminosita / Brillo
	Kontrast / Contrast / Contraste / Contrasto / Contraste
	Farbkontrast / Colour contrast / Contraste des coleurs / Contrasto colore / Contraste de color
	Schutzschaltung / Protection circuit / Circuit de sécurité / Circuito di protezione / Circuito de protección
A-AM	Audio AM
ABK	(Burst Key): Burstaustastimpuls / Burst blanking pulse / Impulsion de suppress. de burst / Imp. di soppress. del burst / Imp. supresion burst
AUDIO	Ton-Signal / Audio signal / Signal audio / Segnale audio / Señal audio
AUDIO-L	Ton-Signal links / Audio signal left / Signal audio gauche / Segnale audio sinistra / Señal audio izquierda
AUDIO-R	Ton-Signal rechts / Audio signal right / Signal audio droit / Segnale audio destra / Señal audio derecha
AUDIO MAC	Tonsignal D2 Mac / Audio signal D2MAC / Signal audio D2MAC / Segnale audio D2MAC / Señal de sonido D2MAC /
AUDIO L-MAC	Tonsignal links D2 Mac / Audio signal left D2MAC / Signal audio gauche D2MAC / Segnale audio sinistro D2MAC / Señal de sonido izquirdo D2MAC
AUDIO R-MAC	Tonsignal rechts D2 MAC / Audio signal right D2MAC / Signal audio droit D2MAC / Segnale audio destro D2MAC / Señal de sonido derecho D2MAC /
AUDIO SUB	Audio Tieftöner / Audio sub woofer / Audio haut-parleur pour les frequences basses / Audio toni bassi / Audio sonido bajo
AUDIO TV	Audio-Signal FS Gerät / Audio signal TV set / Signal audio téléviseur / Segnale audio TV / Señal audio TV
AUDIO VCR	Tonsignal VCR Gerät / Audio signal VCR unit / Signal audio magnetoscope / Segnale audio VCR / Señal audio VCR
A-ZF 1	Audio ZF 1 / Audio IF 1 / Audio FI 1 / Audio FI 1 / Audio FI 1
A-ZF 2	Audio ZF 2 / Audio IF 2 / Audio FI 2 / Audio FI 2 / Audio FI 2
B EXT	Blau-Signal / Blue signal / Signal bleu / Segnale blu / Señal azul
BB	Basisband / Baseband / Bande de base / Banda base / Banda base
B EXT	Blau-Signal extern / Signal blue external /Signal bleu externe / Segnale blu esterno / Señal azul externa
B OSD	OSD-Einblendung blau / OSD blue / Eblouissement OSD bleu / Visualizzazione OSD blu / Visualisacione OSD azul
B PIP	Blau-Signal PIP / PIP Blue signal / Signal bleu PIP / Segnale blu PIP / Señal azul PIP
B/50	Blau - Signal - 50Hz vert.,15625Hz hor. / Blue signal - 50Hz vert., 15625Hz hor. / Signal bleu - 50Hz vert., 15625Hz hor. / Segnale bleu - 50Hz vert., 15625Hz hor. / Señal azul - 50Hz vert., 15625Hz hor.
B/100	Blau-Signal -100Hz vert., 31250Hz hor. / Blue signal -100Hz vert., 31250Hz hor. / Signal bleu -100Hz vert., 31250Hz hor. / Segnale blu -100Hz vert., 31250Hz hor. / Señal azul -100Hz vert., 31250Hz hor.
B-Y/50	B-Y -Signal - 50Hz vert., 15625Hz hor. / B-Y -Signal - 50Hz vert., 15625Hz hor. / Signal B-Y - 50Hz vert., 15625Hz hor. / Segnale B-Y - 50Hz vert., 15625Hz hor. / Señal B-Y - 50Hz vert., 15625Hz hor.
B-Y/100	B-Y -Signal - 100Hz vert., 31250Hz hor. / B-Y -Signal - 100Hz vert., 31250Hz hor. / Signal B-Y - 100Hz vert., 31250Hz hor. / Segnale B-Y - 100Hz vert., 31250Hz hor. / Señal B-Y - 100Hz vert., 31250Hz hor.
C	Kanalwahl / Channel selection / Sélection de canaux / Selez. canale / Seleccion canal
CENTER	Mittelpunkt-Lautsprecher / Center loudspeaker / Haut-parleur de centre / Alto parlante punto centrale / Altavoz del centro
CHIP ADR	Chip Adresse / Chip adress / Chip direction / Indiri. del chip / Direccion chip
CINCH AUDIO L	Ton-Signal Cinch links / Audio signal cinch left / Signal audio cinch gauche / Segnale audio cinch sinistra / Señal audio cinch izquierda
CINCH AUDIO R	Ton-Signal Cinch rechts / Audio signal cinch right / Signal audio cinch droit / Segnale audio cinch destra / Señal audio cinch derecha
CHROMA	Chroma Signal / Chroma signal / Signal dégree / Croma segnale / Señal croma
CHROMA S-VHS	Chroma S-VHS-Signal / Chroma S-VHS-Signal / Signal dégree de S-VHS / Croma segnale S-VHS / Señal croma S-VHS
CLK	Clock
CL 1	
CL 2	
CSY	Composite Sync. Imp. für VT / Composite sync pulse for TT / Imp. de sync. vidéo-composite pour TXT / Imp. hor. para Video Comp.
CS/100	Kombiniertes Hor./vert. Sync. Signal 31250Hz/100Hz (Composite Sync.) / Combined hor./vert. sync signal 31250Hz/100Hz (Composite Sync) / Signal synchr. hor./vert. combiné 31250Hz/100Hz (Synchr. composité) / Segnale sincr. orizz./vert. 31250Hz/100Hz (Sincr. Composito) / Señal combinada sincr. hor./vert. 31250/100Hz (Sincr. compuesto)
DATA	Daten / Data / Données / Dati / Datos
DL	Verzögerungsleitung / Delay line / Ligne à retard / Linea di ritardo / Linea de retardo
ENA	Freigabe / Enable / Autorisation / Consenso / Habilitacion
ENA ZF	Freigabe ZF / IF Enable / Validation FI / Consenso FI / Autorizacón FI
ENABLE FT	Freigabe FT / Finetuning enable / Autorisation Réglage fin / Abilitaz. Sintonia fine / Habilitacion Sintoinia fina
ENABLE LED	Freigabe LED / LED enable / Autorisation LED / Abilitaz. LED / Habilitacion LED
ENABLE TON	Freigabe Ton / Sound enable / Autorisation son / Abilitaz. audio / Habilitacion sonido
EURO-AV AUDIO-L	Audio-Signal EURO-AV links / Audio signal EURO-AV left / Signal audio EURO-AV gauche / Segnale audio EURO-AV sinistra / Señal audio izquierda EURO-AV
EURO-AV AUDIO-R	Audio-Signal EURO-AV rechts / Signal audio EURO-AV right / Signal audio EURO-AV droit / Segnale audio EURO-AV destra / Señal audio derecha EURO-AV
EURO-AV VIDEO	Video-Signal EURO-AV / Video signal EURO-AV / Signal video EURO-AV / Segnale video EURO-AV / Señal video EURO-AV
F	Farb-Signal / Chroma signal / Signal chroma / Segnale chroma / Señal croma

FBAS — FBAS-Signal / CCVS signal / Signal vidéo composite / Segnale video composito / señal video compuesta

FBAS CINCH — FBAS-Signal-Cinch Buchse / CCVS signal-cinch socket / FBAS-prise à cinch / FBAS-presa cinch / FBAS-cinch

FBAS MAC — FBAS-D2 MAC / D2MAC CCVS signal / Signal vidéo composite-D2MAC / FBAS-D2MAC / FBAS-D2MAC

FBAS TON — Basisband / Baseband / Bande de base / Banda base / Banda base

FBAS TXT / FBAS TEXT — FBAS-Videotext / CCVS videotext / Signal vidéo composite-Télétexte / FBAS-Televideo / FBAS-Teletexto

FBAS SYNC. — FBAS Sync. Signal / CCVS sync signal / Signal sync. vidéo col. comp. / Segnal sincr. video col. comp. / Señal sincr. video compuesta

FBAS S-VHS — FBAS Signal S-VHS / CCVS signal S-VHS / Signal vidéo col. comp. S-VHS / Segnal video col. comp. S-VHS / Señal video compuesta S-VHS

F H ⚡ — Hochspg. / EHT voltage / Haute tens. / Alta tens. / MAT

FRM — Rahmensignal / Frame signal / Signal d'encadrement / Segnale cornice / Señal de marco

FT — Feinabstimmung / Fine tuning / Reglage fin / Sint. fine / Sint. fina

F U — FU-Signal / FU-signal / Signal FU / Segnale FU / Senal FU

F V — FV-Signal / FV-signal / Signal FV / Segnale FV / Senal FV

G — Grün-Signal / Green signal / Signal green external / Signal vert / Segnale verde / Señal verde

G OSD — OSD-Einblendung grün / OSD green / Eblouissement OSD vert / Visualizzazione OSD verde / Visualisacione OSD verde

G PIP — Grün-Signal PIP / Green signal PIP / Signal green PIP/ Signal vert PIP / Segnale verde PIP / Señal verde PIP

G EXT — Grün-Signal extern / Green signal vertical / Signal vert externe / Segnale verde esterno / Señal verde externa

G/50 — Grün-Signal - 50Hz vert.,15625Hz hor. / Green signal - 50Hz vert., 15625Hz hor. / Signal vert - 50Hz vert., 15625Hz hor. / Segnale verde - 50Hz vert., 15625Hz hor. / Señal verde -50Hz vert., 15625Hz hor.

G/100 — Grün-Signal -100Hz vert., 31250Hz hor. / Green signal -100Hz vert., 31250Hz hor. / Signal vert -100Hz vert., 31250Hz hor. / Segnale verde -100Hz vert., 31250Hz hor. / Señal verde -100Hz vert., 31250Hz hor.

GND - H — Nullpunkt Heizung / Ground filament / Point neutre-Chauffage / Punto zero-Filamento / Punto medio filamento

HA — Horiz. Sync. Impuls / Horiz. Sync pulse / Impulsion synchro. horiz. / Impulso sincro orizzontale / Impulso de sinc. horiz.

HDR — Horiz. Ansteuerimpuls / Horiz. drive pulse / Impulsion de commande horiz. / Impulso comando orizzontale / Impulso de control horiz.

HC — Horiz. Klemmimpuls / Horiz. clamp pulse / Impulsion de serrage horiz. / Impulso comando orizzontale / Impulso de garras horiz.

H SYNC — Horizontaler Sync-Impuls / Horizontal Sync impuls / Sync impuls horizontale / Sinc impulso orrizontale / Impulso sync horizontal

HFB — Horiz. Rückschlagimpuls / Horiz. flyback / Impulsion de retour horiz. / Impulso rotorno orizzontale / Impulso de retroceso horiz.

HS — Hor. Sync. Implus für VT / Hor. sync pulse for TT / Imp. de sync. hor. pour TXT / Imp. sincr. orizz. per Televideo / Imp. hor. para Video Comp.

I2S CL / I2S TER / I2S IN / I2S WS — Digitale Datensignale / Digtital data signals / Signal donneé digital / Segnali dati digitali / Señal datos digital

I BEAM — Strahlstrom / Current beam / Current rayon / Corrante del irradire / Corriente de haz

ICL — I²C Bus -Clock

IR — Infrarot-Signal / Signal infrared / Signal infra-rouge / Segnale infrarosso / Señal infrarojo.

IM CLOCK — I²C Bus -Clock

IM IDENT — I²C Bus -Kennung / I²C-Bus Identification / Identification I²C-Bus / Ident. I²C-Bus, Identification I²C-Bus

IM RESET — I²C Bus -Reset

IR CLK — Infrarot Clock / Infrared clock / Signal I.R. horloge / Clock segnale R.I. / Clock infrarojos

IR DATA — Infrarot Signal / Infrared signal / Signal I.R. / Segnale infrarosso / Data infrarrojos

IR VIDEO — Infrarot Signal Video / Infrared signal video / Signal I.R. video / Segnale infrarosso video / Data infrarrojos video

KB — Keyboard

KH AUDIO-L — Tonsignal Kopfhörer links / Audio signal headphone left / Signal audio gauche de casque / Segnale audio sinistra cuffia / Señal audio izquierda auriculares

KH AUDIO-R — Tonsignal Kopfhörer rechts / Audio signal headphone right / Signal audio droit de casque / Segnale audio sinistra cuffia / Señal audio derecha auriculares

L — Lautstärke / Volume / Volume / Volume sonore / Volumen

LED — Leuchtdiode / Light emitting diode / Diode lumineuse / Diodo luminoso / Diodo luminescente

M — Speicher Taste / Memory button / Touche mémoire / Tasto di memoria / Puls. memoria

MEGA LOGIC — Megalogic Daten / Megalogic data / Megalogic dates / Dati Megalogic / Megalogic datas

MODE — Modus / Mode / Mode / Modo / Modo

NIC CLK — NICAM Clock / Clock NICAM / Horloge NICAM / Clock NICAM / Clock NICAM

NORM — Norm Taste / TV standard select button / touche de norme / Tasto norma / Puls. de norma

OWA — Ost-West Ansteuerimpuls / East-west drive impuls / Impulsion de commande Est-Ouest / Impulso comando Est-Ovest / Impulso de control Este-Oeste

P — Programm / Program / Programme / Programma /Programa

P/C — Programm-Kanalwahl / Program channel selection / Progr. sélection de canaux / Progr. selez.canale / Progr. selec. canal

PIP — Bild im Bild / Picture in picture / Image dans l'image / PIP / Imagen en la imagen

P1 — Progr. Taste / Progr. button / Touche Progr. / Tasto Progr. / Puls. Progr.

R — Rot-Signal / Red signal / Signal rouge / Segnale rosso / Señal rojo

REMOTE — Fernbedienung / Remote control / Telecommande / Telecomando / Mando a distancia

R OSD — OSD-Einblendung rot / OSD red / Eblouissement OSD rouge / Visualizzazione OSD rosso / Visualisacione OSD rojo

R PIP — Rot-Signal PIP / Red signal PIP / Signal rouge PIP / Segnale rosso PIP / Señal rojo PIP

R EXT — Rot-Signal extern / Signal red external / Signal rouge externe / Segnale rosso esterno / Señal rojo externa

R-Y/50 — R-Y -Signal - 50Hz vert., 15625Hz hor. / R-Y -Signal - 50Hz vert., 15625Hz hor. / Signal R-Y - 50Hz vert., 15625Hz hor. / Segnale R-Y - 50Hz vert., 15625Hz hor. / Señal R-Y - 50Hz vert., 15625Hz hor.

R-Y/100 — R-Y -Signal - 100Hz vert., 31250Hz hor. / R-Y -Signal - 100Hz vert., 31250Hz hor. / Signal R-Y - 100Hz vert., 31250Hz hor. / Segnale R-Y - 100Hz vert., 31250Hz hor. / Señal R-Y - 100Hz vert., 31250Hz hor.

S — Sonderkanal / Special channel / Canal special / Canale speciale / Canal especial

SB	Strahlstrombegrenzung / Beam current lim. / Lim. cour. de faisceau / Lim. corr. di raggio / Corriente media de haz
SCL	I²C-Bus Clock
SCL 100	Schneller I²C-Bus Clock / I²C-Bus clock high speed / I²C-Bus grande vitesse / I²C-Bus veloce / Clock del I²C-Bus de alta velocida
SDA	I²C-Bus Daten / I²C-Bus data / I²C-Bus données / I²C-Bus dati / I²C-Bus datos
SHIFT VIDEO	Dynamische vert. Versch. 25Hz, aktiv bei Video u. Mix Betrieb / Dynam. vert. shift 25Hz, active on video and mix operation / Decal dynam. de l'image 25Hz, actif sur video et fonction. mixte / Spostam. vert. dinam. 25Hz, attivo con video e. funzionam. misto / Desplaz. dinamico vert. 25Hz, activo con video Y funciones mixtas
SHIFT TEXT	Dynamische vert. Versch. 25Hz, aktiv bei Standbild u. VT / Dyn. vert. shift 25Hz, active on freeze-frame and Teletext / Decal dynam. de l'image 25Hz, actif sur arret immage et Vidéotext (Antiope) / Spostam. vert. dinam. 25Hz, attivo con fermo immag. e Televideo / Desplaz. dinamico vert. 25Hz, activo con imagen parada Y Videotexto
SS	Schutzschaltung / Protection circuit / Cablage protecteur / Pot. de prot. / Circuito de proteccion
SSB	Spitzenstrahlstrombegrenzung / Peak beam current limiting / Lim. de faisceau crete / Lim. corr. catod. di pico / Corrente pico de haz
SSC	Supersandcastle
SSC PIP	Supersandcastle PIP
SSC/100	Supersandcastle 100Hz vert., 31250Hz hor.
SSC/50	Supersandcastle 50Hz vert., 15625Hz hor.
SUR-ROUND	Surround
SYNC	Sync.-Signal / Sync.-Signal / Signal sync / Segnale sync. / Señal de sync.
SYNC. BTX	Sync. BTX / Viewdata Sync / Sync. Télétext / Sincr. Videotel / Sincr. Videotexto
SYNC. VT	Sync. VT / Sync. Teletext / Sync Vidéotexte / Sincr. Televideo / Sincr. Videotexto
SW	Schwarzwert / Black level / Niveau du noir / Livello del nero / Nivel de negro
TE	TEXT-Freigabe / TEXT enable / Autorisation TEXTE / Abilitaz. TELEVIDEO / Habilatation TEXTE
T1	Bei Zweiton, Ton 1 / On two channel sound, sound 1 / Pour double son, son 1 / In bicanale, audio 1 / En dual, sonido 1
T2	Bei Zweiton, Ton 2 / On two channel sound, sound 2 / Pour double son, son 2 / In bicanale, audio 2 / En dual, sonido 2
TT	Tieftöner / Woofer / Haut-parleur pour les frequences basses / Toni bassi / Sonido bajo
U FOC	Fokusspg. / Focussing volt. / Tens. de focalis. / Tens di focalizz. / Tens focalizacion
U G1	Spg. Gitter G 1 / Volt. grid G1 / Tens grille G 1 / Tens. griglia G1 / Tens. rejillas G 1
U H	Hochspannung / High voltage / Haute tension / EAT / Alte tension
U G2	Schirmgitter Spg. / Screen-grid volt. / Tens. de grille - écran / Tens.di griglia schermo / Tens. de rejilla
VA VB	Vertikaler Ansteuerimpuls / Vert. drive pulse / Impulsion de commande verticale / Impulso di comando verticale / Impulso de control vertical
VCL	VCR - Clock
VDR	Freigabe Anzeigebaustein / Display enable / Autorisation pour module indicateur / Modulo indicazione / Habilitacion modulo indicacion
VG	Vert. Gegenkopplung / Vert. feedback / Contre-reaction verticale / Controreazione vert. / Aliment. neg. vert.
VIDEO	Video Signal / Video signal / Signal vidéo / Segnale video / Señal video
VT DATA	Videotext Daten / Teletext data / Données Teletexte / Linea dati Televideo / Data Teletexto
VT SCL	Videotext Clock / Teletext clock / Signal horloge Vidéotext / Clock Televideo / Clock Teletexto
VT SDA	I²C Bus: VT Daten / Teletext data / Données Vidéotext / Dati Televideo / Data Teletexto
V SYNC	Vertikaler Sync-Impuls / Vertical Sync impuls / Sync impuls vertical / Sinc impulso vertical / Impulso sync vertical
Y	Y-Signal / Y Signal / Signal Y /Segnale Y / Señal Y
Y/50	Y-Signal - 50Hz vert., 15625Hz hor. / Y-Signal - 50Hz vert., 15625Hz hor. / Signal Y - 50Hz vert., 15625Hz hor. / Segnale Y - 50Hz vert., 15625Hz hor. / Señal Y - 50Hz vert., 15625Hz hor.
Y/100	Y - Signal - 100Hz vert., 31250Hz hor. / Y -Signal - 100Hz vert., 31250Hz hor. / Signal Y - 100Hz vert., 31250Hz hor. / Segnale Y - 100Hz vert., 31250Hz hor. / Señal Y - 100Hz vert., 31250Hz hor
ZF	Zwischenfrequenz / IF / FI / FI / FI
U AFC	Schaltspg. AFC / AFC switching volt. / Tens. de commut. AFC/ Tens. di commut. AFC / Tens. conmut. CAF
U AV	Schaltspg. AV / Switching volt. AV / Tens. de commut. AV / Tens. di commut. AV / Tens. conmut. AV
U B1	Schaltspg. Band 1 / Switching volt. band 1 / Tens. de commut. bande 1 / Tens. di commut. banda 1 / Tens. conmut. de banda 1
U B2	Schaltspg. Band 3/ / Switching volt. band 3 / Tens. de commut. bande 3 / Tens. di commut. banda 3 / Tens. conmut. de banda 3
U BA	Schaltspg. Bildamplitude / Switching voltage vertical amplitude / Tension de coupure amplitude dimage / Tensione di commutaz. ampiezza d'imagine / Tension de conm. amplitude de imagen di commut. PAL / Tens. conmut. PAL
U BTX	Schaltspg. BTX / Switching volt. BTX (Viewdata) / Tens. commut. Télétext / Tens. commut. VIDEOTEL / Tens. conmut. Teletexto
U C-AV	Schaltspg. Camera Wiederg. über Camera-AV Eingang / Switching volt. cam. playback via Camera-AV input / Tens de commut pour lec. de camera par l'entree Camera-AV / Tens.de commut. in riproduz. camera tramite ingresso Camera-AV / Tens. de serv. reprod. camera a traves de la entrada Camera-AV
U DATA	Schaltspg. Datenbetr. / Switching volt. data mode / Tens. de commut. fonct. données / Tens. di commut. dati / Tens conmut. datos
U DATA EXT	Schaltspg. U Data extern / Switching volt Data ext. / Tension de commutation U Data externe / Tens. di commutazione U-Data esterno / Tensión de conmutatón externa U
U DATA OSD	Schaltspg. für Bildschirm-Einblendung / Switching volt. for On Screen Display / Tens. commut. pour eblouissement On Screen Display / Tens. commut. per di visualizzazione On Screen Display / Tens. conmut. para On Screen Display
U DEEM	Schaltspg. Deemphasis / Switching volt. deemphasis / Tens. commut. desaccent. / Tens. commut. deenfasi / Tens. conmut. deenfasis
U DS	Schaltspg. Dolby-Surround / Switching volt. Dolby-Surround / Tens. commut. Dolby-Surround / Tens. commut. di Dolby-Surround / Tens. de conmut. Dolby-Surround
U EURO-AV	Schaltspg. EURO-AV / Switching volt. EURO-AV / Tens. de commut. EURO-AV / Tens. di commut. EURO-AV / Tens. conmut. EURO-AV
U EU-AV CINCH	Schaltspg. EURO-AV-Cinch-Buchse / Switching volt. EURO-AV-Cinch socket / Tens. commut. prisa Scart - Cinch / Tens. commut. presa Scart -Cinch / Tens. conm. EURO-AV - Cinch
U FBAS	Schaltspannung für Video-Ausgang EURO-AV Buchse / Switch. voltage for video output EURO-AV socket / Tension de commut. pour sortie vidéo EURO-AV / Tension commut. per presa d'uscita video EURO-AV / Tension de conmut. para salida EURO-AV
U HIFI	Schaltspg. HIFI / Switching voltage HIFI / Tens. de commut. HIFI / Tens di commut. HIFI / Tens. conmut. HIFI
U HIFI MUTE	Stummschaltung HiFi / Muting volt. HiFi / Commutation de silence HiFi / Silenzametno HiFi / Muting HiFi
U HUB	Schaltspg. HUB / Switching volt. deviation / Tens. commut. déviation / Tens. commut. deviazione / Tens. conmut. deviacion

Schaltspg. Signalkennung AV 3 / Switching volt. signal identification AV 3 / Tens de commut.identification de signal AV3 / Tens. commut. identificazione segnale / Tens. conmut. identifi. segñal AV3

Stummschaltung Kopfhörer / Muting volt. headphone / Commutation de silence casque / Silenzamento cuffia / Muting auriculares

Gleichspannung für SAT-Basissignal / DC for SAT basic signal / Tens. continue pour SAT base signal / Tens continua per segnale SAT base / Tens. continua para segñal SAT base

Schaltspg. Koinz. / Switching volt. coinc. / Tens de commut. coinc. / Tens di commut. coinc. / Tens. conmut. coinc.

Schaltspg. Koinz. mit Videoquelle verknüpft / Coinc. switching volt. linked with video source / Signal de coincid. combiné avec source video / Tens. di commut. a coinc. combinata con sorg video segñal de coincidencia combinada con video

Schaltspg. LED / Switching volt. LED / Tens de commut. LED / Tens. commut. LED / Conmut. LED

Schaltspg. Leuchtpunktunterdrückung / Switching volt. beam spot suppression / Tens. de commut. suppress. du spot lumineux / Tens. soppr. punto luminoso / Tens. de conmut. filtro supresor del punto luz

Schaltspg. LNC "Aus" / Switching volt. LNC "OFF" / Tens. de commut. LNC "OFF" / Tensione di commut. "Spento" LNC / Tension LNC "OFF"

Schaltspg. D2MAC / Switching volt. D2MAC / Tension de commutation D2MAC / Tens. di commutazione D2MAC / Tensión de conmutación D2MAC

Stummschaltung / Muting / Silencieux / Silenziamento /Muting

Schaltspg. NF 1 / Switching volt. AF 1 / Tension commut. BF 1 / Tens. commut BF 1 / Tens. conm. BF 1

Schaltspg. NF 2 / Switching volt. AF 2 / Tension commut. BF 2 / Tens. commut BF 2 / Tens. conm. BF 2

Schaltspg. NICAM / Switching volt. NICAM / Tens. de commut. NICAM / Tens. commut. NICAM / Tens. de conmut. NICAM

Schaltspg. Norm / Switching volt. Norm / Tens. de commut. standard / Tens. di commut. Norma / Tens. conmut. Norma

Schaltspg. PAL / Switching volt. PAL / Tens. de commut. PAL / Tens. di commut. PAL / Tens conmut. PAL

Schaltspg. Polarität / Switching volt. polarity / Tension commut. polarite / Tens. commut. polarita / Tens. conmut polarizacion

Schaltspg. Ökoschalter / Switching volt. eco switch / Tens. de commut. interr. eco. / Tens. commut. interr. ecologico / Tens. conmut. interr. ecol.

Schaltspg. Panorama View / Switching volt. Panorama View / Tens. de commut. Panorama View / Tens. commut. Panorama View / Tens. conmut. Panorama View

Schaltspg. Reset / Switching volt. Reset / Tens. commut. Reset / Tens. commut. Reset / Tens. conmut. Reset

Schaltspg. RGB1 - RGB2 / Switching volt. RGB1 - RGB2 / Tens. de commut. RGB1 - RGB2 / Tens. di commut. RGB1 - RGB2 / Tens. conmut. RGB1 - RGB2

Schaltspg.-Schutzfunktion / Switching volt.-protective func. / Tens de commut.-sécurité / Tens. di commut.-funz di protez. / Tens. conmut.-proteccion

Schaltspg. SECAM / Switching volt. SECAM / Tens. de commut. SECAM / Tens. di commut. SECAM / Tens. conm. SECAM

Schaltspg. Standby / Switching volt. Standby / Tens. commut. Veille / Tens. commut. Standby / Tens. conmut. Standby

Schaltspg. S-VHS / Switching volt. S-VHS / Tens.de commut. S-VHS / Tens. de commut. S-VHS / Tens. de conmut. S-VHS

Schaltspg. Ton 1-2 / Switching volt. sound 1-2 / Tens. commut. audio 1-2 / Tens. commut. son 1-2 / Tens. conmut. son 1-2

Schaltspg. UHF / UHF switching volt. / Tens. de commut. UHF / Tens di commut. UHF / Tens. conmut. UHF

Schaltspg. VHF / VHF switching volt. / Tens. de commut. VHF / Tens di commut. VHF / Tens. conmut. VHF

Schaltspg. Videoquelle / Switching volt. video source / Tens. de commut. source video / Tens. di commut. sorg. video / Tens conmut. video

Schaltspg. Wischerkontakt / Schwitching voltage temp. contact / Tens. de commut. contact fugitif / Tens. commut. contatto temporaneo / Contacto supresor tens. de conmut.

Schaltspg. ZF breit - schmal / IF switching volt. wide - narrow / Tens. commut. FI large - etroit / Tens. commut. FI larga - stretta / Tens. FI ancho - estrecho

Schaltspg. Bandwahl / Band sel. switching volt. / Tens. de commut. select. bande / Tens. di commut. selez. banda / Tens. conmut. selec. banda

14V Schaltspg. / 14V switching volt. / Tens. commut. 14V / Tens. commut. 14V / Tens. de conm. 14V

22kHz Schaltspg. / 22kHz switching volt. / Tens. commut. 22kHz / Tens. commut. 22kHz / Tens. de conm. 22kHz

0/3/6/9V Schaltspg. / 0/3/6/9V switching volt. / Tens. commut. 0/3/6/9V / Tens. commut. 0/3/6/9V / Tens. de conm. 0/3/6/9V

Schaltspg. 4,5MHz / Switching volt. 4.5MHz / Tens. de commut. 4,5MHz / Tens. di commut. 4,5MHz / Tens conmut. 4,5MHz

Schaltspg. 50-60Hz / Switching volt. 50-60Hz / tens. de commut. 50-60Hz / Tens. di commut. 50-60Hz / Tens. conmut. 50-60Hz

Regelspg. AFC / AFC contr. volt. / Tens. de regul. AFC / Tens. di contr. AFC / Tens. regul. CAF

Regelspg. AFC Satellitentuner / AFC contr. volt. SAT tuner / Tens. de regul. AFC tuner SAT / Tens. di contr. AFC Tuner SAT / Tens. regul. CAF Tuner SAT

Feldstärkeabhängige Spg. / Fieldstrength-depent volt. / Contr. automatique de gain / Tens. dipent. intens. campo / Contr. autom. de gain tens. CAG

Regelspg. / Contr. volt. / Tens. de regul. / Tens. di contr. / Tens regul.

Abstimmspg. Tuner / Tuning volt. tuner / Tens. d'accord tuner / Tens. di sintonia tuner / Tens. sintonia tuner

Regelspg. Verzög. / Delayed contr. volt. / Tens. de regul. retardee / Tens. regul. retardada

Horizontale Ansteuerung / Horiz. drive / Synchr. lignes / Pilotaggio orizz. / Exitación horiz.

31250Hz Ansteuerimp. für Zeilenendstufe / 31250Hz Triggering pulse for horiz. output / 31250Hz commande pour l'étage final lignes / Imp. Pilotaggio di 31250Hz per stadio finale di riga / Impulso de exitación 31250Hz para paso final de lineas

Vert. Parabel / Vert. parabolic signal / Signal parabolique vert. / Segnale parab. vert. / Senal parabolica vert.

Vert. Tastimpuls / Vert. Gating pulse / Imp. trame / Imp. a cadenza vert. / Imp. cuadro

Vert. Tastimpuls 100Hz / Vert. Gating pulse 100Hz / Imp. trame 100Hz / Imp. a cadenza vert. 100Hz / Imp. cuadro 100Hz

Vert. Sägezahn / Vert. saw tooth / Signal dent de scie / Dente di sega vert. / Dientede sierra vert.

Vert. Tastimpuls / Vert. Gating pulse / Imp. trame / Imp. a cadenza vert. / Imp. cuadro

Vert Sägezahn 100Hz / Vert saw tooth 100Hz / Signal dent de scie 100Hz / Dente di sega vert. 100Hz / Dientede sierra vert. 100Hz

Vert. Parabel 100Hz / Vert. parabolic 100Hz signal / Signal parabolique 100Hz vert. / Segnale parab. vert. 100Hz / Senal parabolica vert. 100Hz

Tastimpuls / Gating pulse / Impuls de declenchement / Impulso a cadenza / Imp. puerta

Ref. Impuls hor. / Reference impulse hor. / Imp. de refer.hor. / Imp. di rifer. hor. / Imp. refer. horiz.

Klemmung Ein-Aus / Clamping On-Off / Clampage Marche-Arrêt / Clamping Ins.-Disins. / Clamping Enc.-Apag.

Pulse für Polarotor / Pulses for Polar-Rotor / Impulsions Rotor de Polariastion / Impulsi per Rotore Polarizzazione / Impulsos dara Polarrotor

O-W Amplitude / E-W amplitude / Amplitude E-O / Ampiezza E-O / Amplitud E-O

Operating Hints

This chapter contains excerpts from the operating instructions. For further particulars please refer to the appropriate user instructions the part number of which is indicated in the relevant spare parts list.

WELCOME ...

... to digital terrestrial television

Welcome to a new form of entertainment with new free to air – and subscription services.
Future features are interactive via the modem and Common Interface, and are used for home shopping, home banking and other services.

What is digital TV and why is the world changing to digital transmission?

Digital transmission will do for the eyes what the Compact Disc brought for the ears!
No noise in the picture, no cross effects between the picture and sound content, no influence of multipath reception as a result of reflections to the aerial. The quality of reception is outstanding.
Digital terrestrial television is received through the same aerial that is used for existing analogue TV reception and is transmitted preferably in the widescreen format 16:9 (speak 16 by nine).
Please note, a few TV transmitter stations will have to transmit some of the digital services on new frequencies outside of the existing frequency range.
This would make it necessary to have a broadband aerial installed in order to receive all the new services.

How can I record digital transmissions?

Dont worry, this is possible via the Scart extension from your Grundig TV. Refer to page 14.
More good news: Digital terrestrial TV was introduced in november '98, but new features for interactivities may change the existing TV's software. Don't worry! Your TV is prepared for updating any kind of change via the Common Interface (PCMIA) slot on the rear of the TV. Refer to page 10.
Flashcards to do this are available, if needed, via your dealer or our Service Organisation.
If you want to judge the picutre quality, just follow the instructions on page 62.
Your GRUNDIG IDTV (Integrated Digital TV) displays an integrated colour bar test pattern in digital mode – in digital resolution.
Impressive this new TV generation – isn't it. Grundig made for you.

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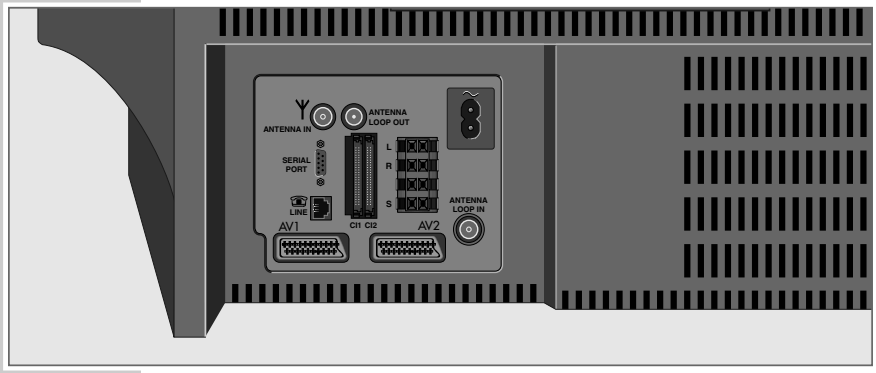
AT A GLANCE

The rear of the TV set



Y ANTENNA IN	Input for house aerial.
ANTENNA LOOP OUT	Aerial output (to »**ANTENNA LOOP IN**« socket or to external equipment).
~	Mains cable to mains socket.
SERIAL PORT	Service connector for specialized dealer.
☎ LINE	Modem connection socket.
CI1 CI2	Common Interface slots for expansion modules. These modules must be 3,3 V or 5 V compatible.
L R	Clamping terminals for front loudspeakers.
S	Clamping terminals for surround loudspeakers.
ANTENNA LOOP IN	Aerial input.
AV 1	Euro/AV socket (Mecalogic, CSCC, S-VHS).
AV 2	Euro/AV socket (CSCC, S-VHS).

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AT A GLANCE

The remote control

⏻	Switches the TV set to stand-by.
1...9 **0 AV**	Switch the TV set on from stand-by; select channel and AV programme positions directly; enter the teletext page numbers.
▽ △	Switch the TV set on from stand-by (only »△«); select channels step by step; move cursor up/down.
◀ ▶	Change volume setting; move cursor to the left/to the right.
OK	Changes and activates different functions; switches between the two TV channels last viewed; switches to optimum settings (»**AUX**« and »**OK**«).
i	Calls up the digital and the analogue Dialogue Centre (»**i**« and »**OK**«).
EPG ▭	Calls up the "electronic TV Programme Guide" in digital mode.
TXT	Switches between teletext and TV mode in analogue mode and MHEG application in digital mode.
	Sound on/off (mute)
	Calls up the »Picture settings« menu.
	Clock time on/off.
D/A	Switches between analogue and digital TV channels (services).
	Calls up the »Sound settings« menu.

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AT A GLANCE

– ◑ +	Adjust colour intensity.
– ☼ +	Adjust brightness.
i-ACTIV	Switches the remote control buttons between MHEG operation and TV operation.
CL	Ends a running Timer recording.
⇔	Switches the picture format.
AUX	Preselection button for various functions; calls up the »AUX« menu.
SAT	Switches to remote control of a GRUNDIG satellite receiver. See page 63 for a description of the possible functions.
VIDEO	Switches to remote control of a GRUNDIG video recorder. See page 63 for a description of the possible functions.

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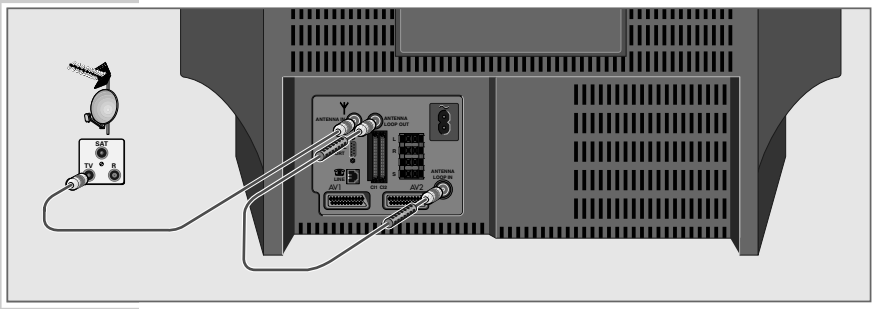
CONNECTION AND PREPARATION

Connecting the aerial, a video recorder, a satellite receiver

Connecting the aerial to the TV set



1 Connect the cable from the house aerial with the »Y **ANTENNA IN**« socket on the TV set.

2 Connect the aerial cable supplied with the »**ANTENNA LOOP OUT**« socket and the »**ANTENNA LOOP IN**« socket on the TV set.

Note:
When receiving stations in band 1 (45 MHz - 62 MHz) or in band 3 (175 MHz - 225 MHz), it is necessary to connect a frequency filtre in front of the aerial input »Y **ANTENNA IN**« (Ask your GRUNDIG Dealer).

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SETTINGS

Channel programming

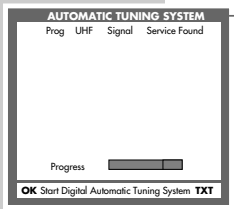
The TV set is equipped with an automatic tuning system for analogue and digital TV channels. The tuning can take approx. 15 minutes.
When the set is first powerd up and you start the automatic tuning system the TV set searches at first for digital TV channels and then for analogue TV channels.

99 channel positions for digital TV channels (services) and 99 channel positions for analogue TV channels are available.

When the automatic search is completed, you may sort the channels in a sequence of your choice for digital and then for analogue channels. Mixing is not possible.

You may delete TV channels which have been found several times, or those with poor reception quality, from the TV programme charts.

Programming digital and analogue TV channels using the automatic tuning system



1 Switch the TV set on by pressing »**IO**« on the TV set.
– The »AUTOMATIC TUNING SYSTEM« screen appears.

2 Start the search with »**OK**«.
– The TV set searches at first for digital TV channels and then for analogue TV channels. Depending on the number of channels which can be received, the search can take some time.
– When the search is completed, the TV set switches to channel position 1 and the »DIGITAL PROGRAM SORT« screen appears.

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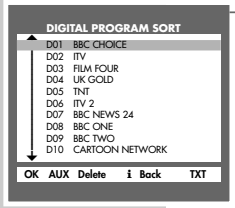
SETTINGS

Note:
The search can be aborted at any time by pressing »**TXT**«.
If the search system has found no digital TV services, the message »No Digital Services Found« appears.

Delete digital TV channel positions

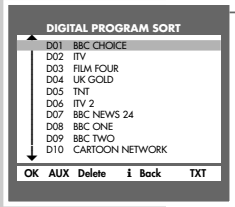


1 In the »DIGITAL PROGRAM SORT« table, select the channel to be cleared with »▲« or »▼«.

2 Delete the channel with »**AUX**«.

Notes:
To clear further channel positions, repeat the steps **1** and **2**.
If the channel position is locked (see chapter „Parental Lock" on page 44), it cannot be deleted.

Sorting digital TV channels



1 In the »DIGITAL PROGRAM SORT« table, select the channel position of the channel to be moved to another position with »▲« or »▼«.

2 Mark the channel with »**OK**«.

3 Select the channel position to which the marked channel is to be moved with »▲« or »▼«.

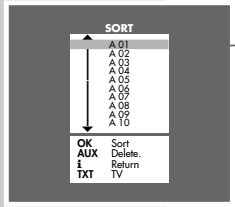
4 Store the setting with »**OK**«.

Note:
To sort further channels, repeat the steps **1** to **4**.

5 Continue the setting for analogue TV channels by pressing »**TXT**«.

SETTINGS

Delete analogue TV channel positions

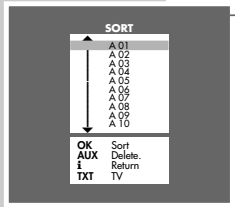


1 In the »SORT« table, select the channel to be cleared with »▲« or »▼« .

2 Delete the channel with »**AUX**«.

Note:
To clear further channel positions, repeat the steps **1** and **2**.

Sorting analogue TV channels



1 In the »SORT« table, select the channel position of the channel to be moved to another position with »▲« or »▼«.

2 Mark the channel with »**OK**«.

3 Select the channel position to which the marked channel is to be moved with »▲« or »▼«.

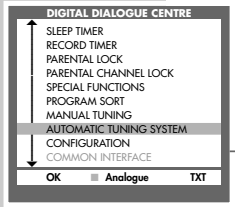
4 Store the setting with »**OK**«.

Note:
To sort further channels, repeat the steps **1** to **4**.

5 End the setting with »**TXT**«.

SETTINGS

Programming new digital TV channels using the automatic tuning system



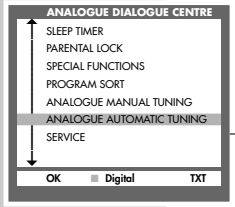
The TV set searches for new digital TV services. These are added to the already existing services in the »DIGITAL PROGRAM SORT« table. This can take approx. 15 minutes.

1 In digital mode, call up the »DIGITAL DIALOGUE CENTRE« by pressing »i« and then »**OK**«.

2 Select the »AUTOMATIC TUNING SYSTEM« row with »▲« or »▼« then confirm with »**OK**«.

3 Start the search with »**OK**«.
– The end of searching is indicated by the menu »DIGITAL PROGRAM SORT«.
See page 20 for information about sorting and clearing digital services.

Programming new analogue TV channels using the automatic tuning system



The TV set searches for new analogue TV channels. These are inserted in the »SORT« table in the place of the existing channels.

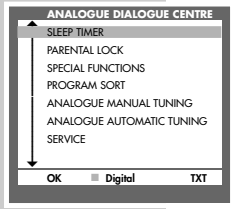
1 In analogue mode, call up the »ANALOGUE DIALOGUE CENTRE« by pressing »i« and then »**OK**«.

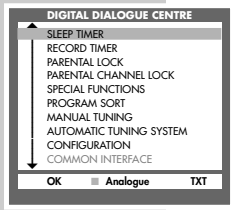
2 Select the »AUTOMATIC TUNING SYSTEM« row with »▲« or »▼« then confirm with »**OK**«.

3 Start the search with »**OK**«.
– The end of searching is indicated by the menu »SORT«.
See page 21 for information about sorting and clearing analogue TV channels.

SETTINGS

The Dialogue Centre





In the Dialogue Centre you can make a variety of settings, call up information, and get specific help for operating your television.
For this TV set, two Dialogue Centres are available:
– the analogue Dialogue Centre for operation with analogue TV programmes,
– the digital Dialogue Centre for operation with digital TV programmes.

The line »COMMON INTERFACE« is greyed out. Please see page 54 for information on possible future upgrades.

Functions which are the same for analogue and digital reception are to be found under the same function names.

The Digital Dialogue Centre comprises additional functions which are possible when receiving digital TV channels (services).

1 Call up the Dialogue Centre with »i« and then »**OK**«.
– Which Dialogue Centre appears, depends on which TV programme (analogue or digital) has been selected.
– Button symbols and dialogue lines display possible operating steps.
– The characters on the screen are symbols for the following buttons on the remote control:

Symbol	Button	Function
i	i	Calls up the »DIALOGUE CENTRE« (»i« then »**OK**«) and switches back to the »Dialogue Centre« when you are on an individual page.
▲ ▼	▲ ▼	Call up rows or functions on a page step by step.
◄ ►	◄ ►	Change settings.
OK	**OK**	Confirms functions.
TXT	**TXT**	Ends settings.

2 Switch between the »ANALOGUE DIALOGUE CENTRE« and the »DIGITAL DIALOGUE CENTRE« by pressing »**D/A**«.

3 Exit the »DIALOGUE CENTRE« by pressing »**TXT**«.

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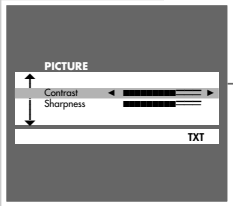
SETTINGS

Picture settings

Adjusting the contrast and sharpness



1 Call up the »PICTURE« menu with »👁«.
– The »PICTURE« menu appears.

2 Select the desired function (»Contrast« or »Sharpness«) with »△« or »▽«.

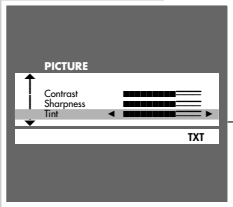
3 Adjust the contrast or sharpness with »◀« or »▶«, respectively.

Note:
The TV set has been tested using maximum contrast, in order to check for reliability of all modules. Depending on the location of the set and the brightness in the room (surrounding light) it does however make sense to reduce the contrast slightly for the best possible picture impression.
The sharpness adjustment is not needed for digital services, i.e. the row »Sharpness« is not available in digital mode.

4 End the setting with »**TXT**«.

Adjusting the tint for NTSC broadcasts

Note:
The »Tint« row appears only with NTSC broadcasts.



1 Call up the »PICTURE« menu with »👁«.
– The »PICTURE« menu appears.

2 Select the »Tint« row with »△« or »▽«.

3 Adjust the tint with »◀« or »▶«.

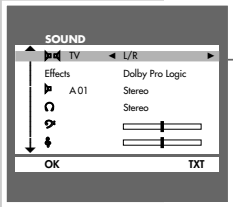
4 End the setting with »**TXT**«.

SETTINGS

Sound settings

Stereo/two-channel sound, mono

If the TV set receives two-channel sound transmissions – e.g. a film in the original language on sound channel B (display: » DUAL B «) and the synchronized version on sound channel A (display: » DUAL A «) – then you may select the desired sound channel.
If the set receives stereo or NICAM transmissions, it automatically switches to stereo sound (display: »Stereo«). If stereo reception is poor, then the sound should be switched to » Mono «.



1 Call up the »SOUND« menu with »♪«.

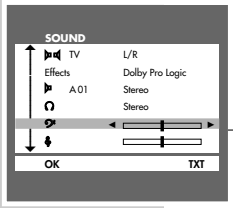
2 Select the »♪ A 01« (A = analogue TV channel) row with »△« or »▽« then select the desired sound mode with »◀« or »▶« .

3 If the sound for a particular channel is to be permanently in mono, select the »♪ P..« row with »△« or »▽« then press »**OK**«.

Note:
To cancel this setting, repeat step **3**.

4 End the setting with »**TXT**«.

Adjusting the bass and treble



1 Call up the »SOUND« menu with »♪«.

2 Select the desired row (»♪« – bass, or »♪« – treble) with »△« or »▽«.

3 Adjust the bass or treble with »◀« or »▶«, respectively.

4 End the setting with »**TXT**«.
– The setting is saved automatically.

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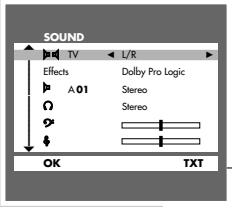
SETTINGS

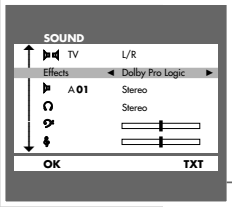
Sound settings for Dolby Pro Logic mode



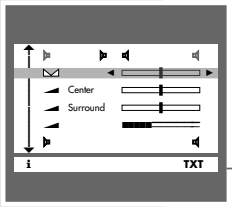
With this setting you select:
– the Dolby effects;
– the loudspeaker configuration required;
– the loudspeaker volume levels;
– the overall volume.

1 Call up the »SOUND« menu with »?«.

2 Select the »♪ .. 🔇 TV« row with »▲« or »▼« then use »◀« or »▶« to select the desired loudspeaker configuration.
– Configurations available:
»L/R« – The loudspeakers of the TV set are used as left/right loudspeakers.
»Center« – The loudspeakers of the TV set are used as centre loudspeaker.
»off« – The loudspeakers of the TV set are switched off. Instead, external front and/or centre loudspeakers are used.



3 Select the »Effects« row with »▲« or »▼« then use »◀« or »▶« to select the desired Dolby effect.
– Dolby effects available:
»off«, »Dolby Pro Logic«, »Dolby 3 Stereo«, »Pro Logic Phantom«, »Panorama«, »Pseudo Surround«.
– If the »Center« loudspeaker configuration has been selected in the »♪ .. 🔇 TV« row, only the Dolby effects »Dolby Pro Logic«, »Dolby 3 Stereo« or »Pseudo Surround« can be selected.



4 Select the »♪ .. 🔇 TV« row with »▲« or »▼« then press »**OK**«.
– The menu appears and you will hear a noise (test signal) from the loudspeakers.

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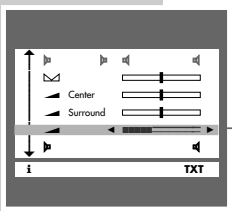
– The test signal is emitted in the following order:
balance (right/left),
centre loudspeaker,
surround loudspeakers.
– The highlighted cursor bar and the red loudspeaker symbol indicate which loudspeaker is currently emitting the test signal.
– As long as the cursor bar is highlighted, it is possible to adjust the corresponding loudspeaker configuration for optimum sound in your living room.

5 When »◺◿« (Balance) is highlighted, use »◀« or »▶« to adjust the front loudspeakers so that they emit with the same volume.

6 When »◿ Center« is highlighted, use »◀« or »▶« to adjust the centre loudspeaker so that it emits with the same volume as the front loudspeakers.

7 When »◿ Surround« is highlighted, use »◀« or »▶« to adjust the surround loudspeakers so that they emit with the same volume as the front loudspeakers.

Note:
As long as »◀« or »▶« is pressed in the steps **5** to **7**, the cursor remains on the selected position.
The test signal is emitted only from the selected loudspeakers.
As soon as »◀« or »▶« is released, the cursor bar jumps to the next position in the test signal cycle.



8 Select the »◿« row with »▲« or »▼« then use »◀« or »▶« to select the desired volume for all loudspeakers.

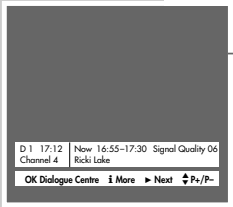
9 End the setting with »**TXT**«.

TV OPERATION

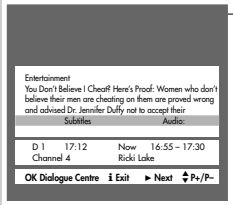
Functions for digital TV services

Information about the digital TV service

This information comprises the station name, the start and end time of the broadcast, and information about the broadcast, if available.
This information is displayed in the bottom part of the picture screen.



1 Press »i« to call up the information.
– The information about the current broadcast on the channel selected is briefly displayed.
D 1 Channel 4 – Channel position with station name.
17:12 – Current time.
NOW 16:55 – 17:30 – Current broadcast with start and end time.
Signal Quality 06 – Signal quality indication. If no suitable signal is present, the message »Bad Signal« will be displayed in place.


Entertainment
You Don't Believe ! Cheat? Here's Proof: Women who don't believe their men are cheating on them are proved wrong and advised Dr. Jennifer Duffy not to accept their
Subtitles Audio:
D 1 17:12 Now 16:55 – 17:30
Channel 4 Ricki Lake
OK Dialogue Centre i Exit ► Next P+/P–

Note:
Pressing »i« will display more information about the current broadcast.
This information shows subtitles and the language if available.
See chapter „SPECIAL SETTINGS" on page 62 for information about selecting subtitles and language.
If this channel is locked, this will be indicated as »P. Lock«.

2 To get information about the next broadcast on the same channel, press »►«. To return to the information about the current broadcast, press »◄«.

3 To get information about further channels, press »▲« or »▼«.

Note:
Press »**OK**« if you wish to watch the programme on the channel about which information is currently displayed on the picture screen.

4 Press »i« once or twice to switch the information display off.

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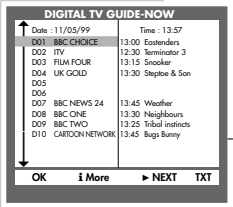
TV OPERATION

TV Guide for digital TV services

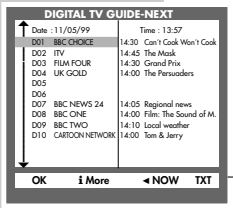
The TV Guide informs you about all broadcasts on all digital channels. This information comprises the channel position, the station name, the start and end time of the broadcast, and information about the broadcast, if available.


DIGITAL TV GUIDE-NOW
Date : 11/05/99 Time : 13:57
D01 BBC CHOICE 13:00 Eastenders
D02 ITV 12:30 Terminator 3
D03 FILM FOUR 13:15 Snooker
D04 UK GOLD 13:30 Steptoe & Son
D05
D06
D07 BBC NEWS 24 13:45 Weather
D08 BBC ONE 13:30 Neighbours
D09 BBC TWO 13:25 Tribal instincts
D10 CARTOON NETWORK 13:45 Bugs Bunny
OK i More ► NEXT TXT

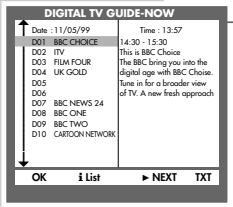
1 Press »**EPG**« to call up the information.
– The »DIGITAL TV GUIDE – NOW« with information about the first 10 channel positions appears on the picture screen:
Date 11/05/99 – current date
Time:13:57 – current time

D01 BBC CHOICE – channel position 1 and station name
13:00 Eastenders – current broadcast

Note:
The channel positions 11 to 99 can be selected with »▲« or »▼«.


DIGITAL TV GUIDE-NEXT
Date : 11/05/99 Time : 13:57
D01 BBC CHOICE 14:30 Can't Cook Won't Cook
D02 ITV 14:45 The Mask
D03 FILM FOUR 14:30 Grand Prix
D04 UK GOLD 14:00 The Persuaders
D05
D06
D07 BBC NEWS 24 14:05 Regional news
D08 BBC ONE 14:00 Film: The Sound of M.
D09 BBC TWO 14:10 Local weather
D10 CARTOON NETWORK 14:00 Tom & Jerry
OK i More ◄ NOW TXT

2 To get information about the next broadcast on the same channel, press »►«. To return to the information about the current boradcast, press »◄«.


DIGITAL TV GUIDE-NOW
Date : 11/05/99 Time : 13:57
D01 BBC CHOICE 14:30 - 15:30
D02 ITV This is BBC Choice
D03 FILM FOUR The BBC bring you into the digital age with BBC Choise. Tune in for a broader view of TV. A new fresh approach
D04 UK GOLD
D05
D06
D07 BBC NEWS 24
D08 BBC ONE
D09 BBC TWO
D10 CARTOON NETWORK
OK i List ► NEXT TXT

3 To get detailed information, use »▲« or »▼« to select the desired channel position then press »i«.
– The information is displayed in the right-hand window. Press »i« again to switch the information off.

4 It is possible to select a channel directly in the »DIGITAL TV GUIDE« menu. To do this, select the channel position with »▲« or »▼« then press »**OK**«.
– The menu is switched off and you will see the selected TV programme.

5 Press »**TXT**« to switch the »DIGITAL TV GUIDE« menu off.

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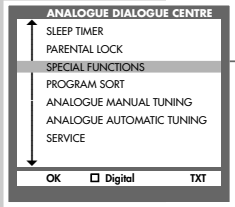
CONVENIENCE FUNCTIONS

Convenience functions via the »SPECIAL FUNCTIONS« menu



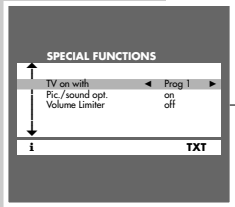
1 Call up the »DIALOGUE CENTER« by pressing »i« and then »**OK**«.

2 Select the »SPECIAL FUNCTIONS« row from the »DIALOGUE CENTRE« with » ▲ « or » ▼ « then confirm with »**OK**«.

Note:
See the following chapters for further operation.

TV on with ...

If you frequently use the set as an AV monitor – e.g. together with a camera as a monitoring system or together with a satellite receiver – then this function can give priority to the programme position » AV «.
After switching on with the on/off switch, instead of programme position » P 1 «, programme position » AV « will appear.

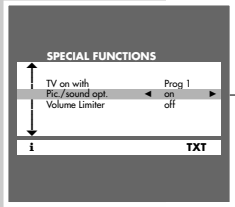


1 Select the »TV on with« row with » ▲ « or » ▼ « then select channel position »AV« with » ◀ « or » ▶ «.

2 End the setting by pressing »**TXT**«.

Picture/sound scale on/off

To adjust volume, brightness and colour contrast, scales appear. These may be switched off.



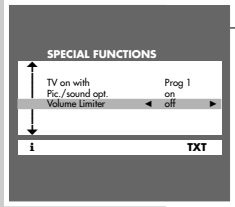
1 Select the »Pic./Sound opt.« row with » ▲ « or » ▼ « then select »off« with » ◀ « or » ▶ « ».

2 End the setting by pressing »**TXT**«.

CONVENIENCE FUNCTIONS

Equalizing the volume

The volume of normal TV broadcasts and commercials may be different. You may equalize this volume.



1 Select the »Volume Limiter« row with » ▲ « or » ▼ « then select »on« with » ◀ « or » ▶ « ».

Note:
This function is only possible if »off« has been selected in the »Effects« row in the »SOUND« menu.

2 End the setting by pressing »**TXT**«.

Entering a switch-off time in the »SLEEP TIMER« menu

You can input a switch-off time for your TV set via the »SLEEP TIMER« menu. The set switches to stand-by after the set time has elapsed.

1 Select the »SLEEP TIMER« row from the »DIALOGUE CENTER« with » ▲ « or » ▼ « then confirm with »**OK**«.
– The »SLEEP TIMER« menu appears.

2 Enter the desired switch-off time (01…99 minutes) with two digits using the »**1…0**« buttons.

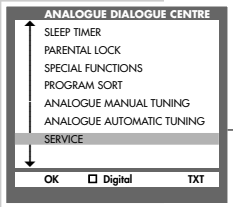
Note:
The switch-off time can be cleared with »**AUX**«.

3 Confirm the setting by pressing »**TXT**«.

ENGLISH

CONVENIENCE FUNCTIONS

Convenience functions via the »SERVICE« menu



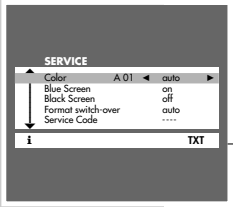
Note:
These convenience functions are only possible with analogue TV programmes.

The »Service Code« function is provided for the specialized dealer only.

1 Call up the »DIALOGUE CENTRE« by pressing »i« and then »**OK**«.

2 Select the »SERVICE« row from the »DIALOGUE CENTRE« with »▲« or »▼« then confirm with »**OK**«.

Note:
See the following chapters for further operation.

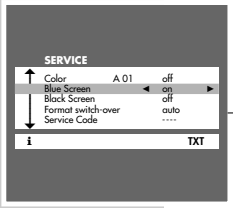


Adjusting manually the colour norm

The colour norms are automatically assigned when allocating the channel position with the automatic station search. You do not need to carry out this setting if the colour is already well adjusted on the different channels.

1 Select the »Color« row with »▲« or »▼« then select the required colour norm using »◀« or »▶«.

2 End the setting by pressing »**TXT**«.



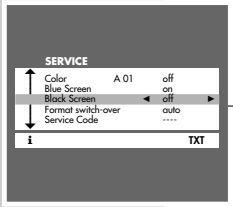
Selecting a blue picture screen

With this function, a grainy image is switched to a blue image.

1 Select the »Blue screen« row with »▲« or »▼« then use »◀« or »▶« to select »on«.

2 End the setting by pressing »**TXT**«.

CONVENIENCE FUNCTIONS

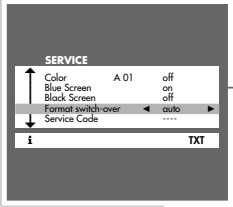


Selecting a black picture screen

With this setting, it is possible to avoid distracting flickering of channels whilst switching channel positions.

1 Select the »Black screen« row with »▲« or »▼« then use »◀« or »▶« to select »on«.

2 End the setting by pressing »**TXT**«.



Picture format switch-over

If recpetion conditions are poor in analogue mode, you may switch off the automatic picture format switchover.

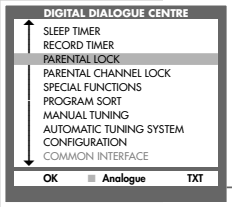
1 Select the »Format switch-over« row with »▲« or »▼« then use »◀« or »▶« to select »manual«.

2 End the setting by pressing »**TXT**«.

ENGLISH

PARENTAL LOCK

By using this function, you may protect the TV set against unauthorized use.
You may block all functions or certain digital channels.

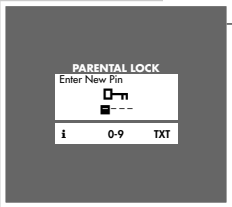


Blocking all functions of the TV set

Note:
This function can be selected both in the »DIGITAL DIALOGUE CENTRE« and the »ANALOGUE DIALOGUE CENTRE«.

1 Call up the »DIALOGUE CENTRE« by pressing »**i**« and then »**OK**«.

2 Select the »PARENTAL LOCK« row from the »DIALOGUE CENTRE« with »▲« or »▼« then confirm with »**OK**«.



3 Enter a four-digit code number using the »**1...0**« buttons then save the number with »**OK**«.
– The key symbol is displayed in red.

4 End the setting by pressing »**TXT**«.
– After switching off the set and switching on again, the page »Parental lock« appears, all functions are locked.

Note:
If you forget the number code, a number combination given in the „CORRECTING PROBLEMS YOURSELF" chapter on page 67 will allow you to unlock the set.

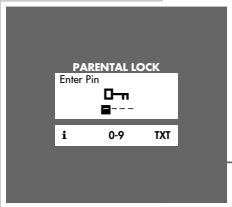
Unlocking the TV set temporarily

1 Switch the TV set on.

2 Enter the four-digt code using the »**1...0**« buttons.
– The TV programme becomes visible.
After switching off the set and switching on again, the parental lock is activated again.

PARENTAL LOCK

Cancelling the parental lock



1 Switch the TV set on and enter the four-digt code using the »**1...0**« buttons.
– The key symbol is displayed in red.

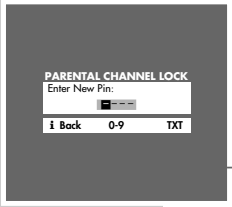
2 Call up the »DIALOGUE CENTRE« by pressing »**i**« and then »**OK**«.

3 Select the »PARENTAL LOCK« row from the »DIALOGUE CENTRE« with »▲« or »▼« then confirm with »**OK**«.

4 Enter the four-digit code number using the »**1...0**« buttons then confirm the number with »**AUX**«.
– The parental lock is cancelled.

5 End the setting by pressing »**TXT**«.

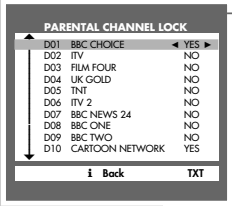
Locking digital services



1 Call up the »DIGITAL DIALOGUE CENTRE« by pressing »**i**« and then »**OK**«.

2 Select the »PARENTAL CHANNEL LOCK« row with »▲« or »▼« then confirm with »**OK**«.

3 Enter a four-digit code number using the »**1...0**« buttons then store the number with »**OK**«.
– The »PARENTAL CHANNEL LOCK« menu appears.



4 Select the service which is to be locked with »▲« or »▼« then activate the lock with »▶«.
– The indication »NO« changes into »YES« and the channel is locked. If the locked service is selected, the TV set demands you to enter the code number.
– To lock further services, repeat the step **4**.

5 End the setting by pressing »**TXT**«.

Note:
To unlock the locked services, repeat the setting from step **1**, but press »**OK**« again in step **4**.

ENGLISH

MHEG FUNCTIONS

What is MHEG?

The MHEG functions (Multimedia and Hypermedia Experts Group) are an extended and convenient teletext service.

With the MHEG functions and the integrated modem, your TV set is prepared for interactive operation with external devices and TV stations, such as home shopping and homebanking.

The MHEG functions will probably be introduced by the TV broadcasters at the end of 1999.

Please consult your specialized dealer for more information about software updates and retrofit kits via a common interface.

Operation with the MHEG functions

If a station is broadcasting the MHEG service, this is indicated by the yellow LED next to the mains button.

The »**TXT**«, »**CL**«, » ⚠ «, » ▽ «,» ◀ «,» ▶ «, and the four colour buttons are automatically switched over to MHEG mode.

Pressing the »**i Activ**« button switches between MHEG mode and normal TV mode.

MODEM FUNCTIONS

Notes:

Connect your modem socket only to an exchange line.

Do not use the modem as an extension to a pay telephone.

Your TV set is provided with a so-called Ringer Equivalence number. The number is 1.

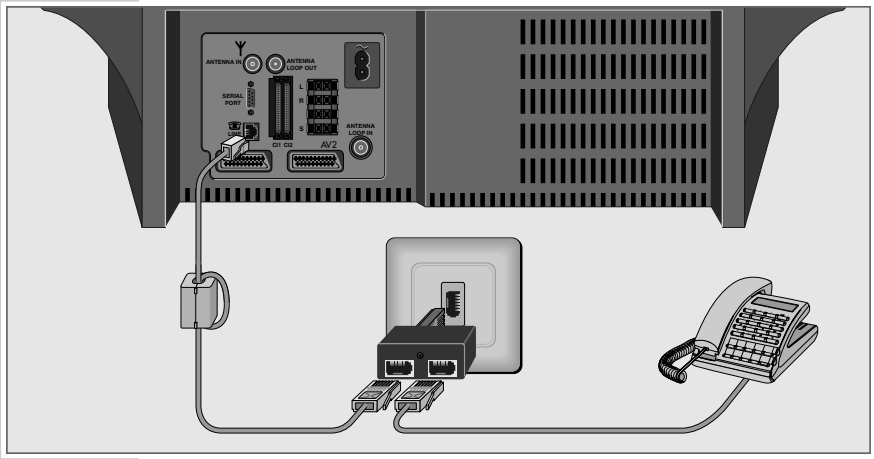
It is possible to connect further telecommunication devices to the telephone line provided not more than 4 Ringer Equivalence numbers are used.

The modem in your TV set is provided to function with Common Interface (CI) modules.

For further instructions see the Common Interface user manual.

MODEM FUNCTIONS

Connecting the TV set to a telephone socket



1 Connect the » LINE« socket on the TV set (RJ11 plug) and the telephone adapter (431A plug) with a commercially available modem cable (with ferrite-clip).

2 Connect the telephone lead with the second socket on the telephone adapter.

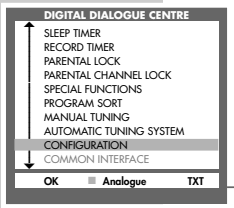
3 Plug the telephone adapter into the telephone socket.

Note:
When using a cable without ferrite clip, this must be retrofitted. When doing this, one winding must be inserted through the clip. This clip is available from your Grundig dealer.

MODEM FUNCTIONS

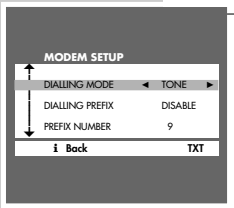
Settings for modem operation

With this setting you determine
– the dialling mode.
This requires you to inform the modem of what type of phone line you use (pulse or tone dialling). Pick up and listen to the sound coming from your phone during dailing. If it is continuous, then you must select "TONE", if it is intermittent, then you must select "PULSE"
– the dialling prefix and prefix number.
The TV set may be operated in a place where its use and viewing is communal, for example in offices, schools or shops. If this is the case, the prefix needs to be enabled. This is done by selecting the "ENABLE" setting. In addition, the prefix number (0 to 9) needs to be adjusted to accommodate that of the normal phonelines of the office, school or shop.
If the TV set is used at home, this setting is not required.



1 Call up the »DIGITAL DIALOGUE CENTRE« by pressing »i« and then »**OK**«.

2 Select the »CONFIGURATION« row with »▲« or »▼« then confirm with »**OK**«.



3 Select the »MODEM SETUP« row from the »CONFIGURATION« menu with »▲« or »▼« then confirm with »**OK**«.
– The »MODEM SETUP« menu appears on the picture screen, the »DIALLING MODE« row is highlighted.

4 Select your dialling mode with »◄« or »►« :»PULSE« or »TONE«.

5 Select the »DIALLING PREFIX« row with »▲« or »▼« then use »◄« or »►« to select the »ENABLE« setting.

6 Select the »PREFIX NUMBER« row with »▲« or »▼« then use the »**1 ... 0**« buttons to enter the prefix number (0 to 9).

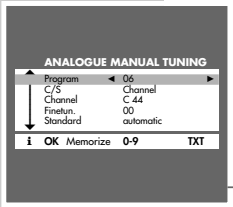
7 Press »**TXT**« to end the setting.

ENGLISH

SPECIAL SETTINGS

Limiting the analogue channel position selection

The ATS search saves all channels it has found and automatically "locks" the first position to which no channel is assigned.
In this way, when channel positions are selected step by step using the »△« or »▽« button, only channels which have been found can be selected.
You may also enter this limit manually, in the following example the "lock" has been activated as of channel position 6.

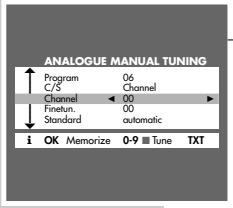


1 Call up the »ANALOGUE DIALOGUE CENTRE« by pressing »i« and then »**OK**«.
– The »ANALOGUE DIALOGUE CENTRE« appears on the picture screen.

2 Select the »MANUAL TUNING« row from the »DIALOGUE CENTRE« with »△« or »▽« then confirm with »**OK**«.

3 Select the channel position (6 in the example) with »◄« or »►« or the buttons »**1...0**«.

4 Select the »C/S« row with »△« or »▽« then press »◄« or »►« to select the »Channel« option.



5 Select the »Channel« row with »△« or »▽« then use the buttons »**1...0**« to enter »00«.

6 Save the setting with »**OK**«.

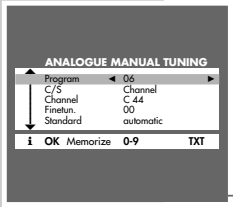
7 Press »**TXT**« to end the setting.

Note:
– Now only the first 5 channel positions (and the »AV« positions) can be selected in rapid sequence with the »△« or »▽« button.
– All single digit channel positions – as well as the "blocked" – can further be selected using the buttons »**1...0**«.
All channel positions can be selected using the buttons »**1...0**« if channel position 11 is blocked.

SPECIAL SETTINGS

Programming analogue TV channels manually

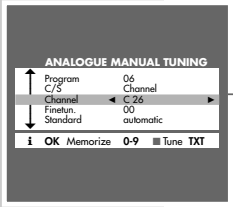
This setting is only required if, for example, a cable provider adds a new channel and you wish to keep your favourite channel order.



1 »Call up the »ANALOGUE DIALOGUE CENTRE« by pressing »i« and then »**OK**«.
– The »ANALOGUE DIALOGUE CENTRE« appears on the picture screen.

2 Select the »ANALOGUE MANUAL TUNING« row from the »ANALOGUE DIALOGUE CENTRE« with »△« or »▽« then confirm with »**OK**«.

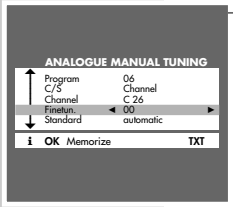
3 Select the channel position with »◄« or »►« or the buttons »**1...0**«



4 Select the »C/S« row with »△« or »▽« then use »◄« or »►« to select the »Channel« or »Special Channel« option.

5 Select the »Channel« row with »△« or »▽« then use »◄« or »►« or the buttons »**1...0**« and enter the desired channel number.

6 Select the »Standard« row with »△« or »▽« then use »◄« or »►« to select the standard required.



7 Fine-tune the picture if necessary. For this, select the »Finetun.« row with »△« or »▽« then use »◄« or »►« to alter the finetuning.

8 Save the setting with »**OK**«.

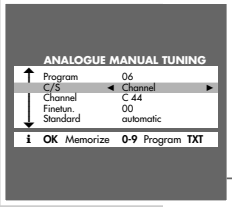
Note:
To programme further channels, repeat the steps **3** to **8**.

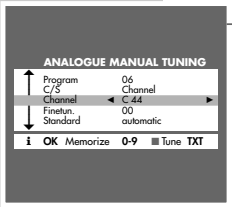
9 Press »**TXT**« to end the setting.

ENGLISH

SPECIAL SETTINGS

Programming analogue TV channels using the automatic tuning system





1 »Call up the »ANALOGUE DIALOGUE CENTRE« by pressing »i« and then »**OK**«.
– The »ANALOGUE DIALOGUE CENTRE« appears on the picture screen.

2 Select the »ANALOGUE MANUAL TUNING« row from the »ANALOGUE DIALOGUE CENTRE« with »▲« or »▼« then confirm with »**OK**«.

3 Select the »Program« row with »▲« or »▼« then enter the desired channel position using the buttons »**1...0**«.

4 Select the »Channel« row with »▲« or »▼« then start the automatic tuning system with the blue »?« button.

Note:
The colour and sound standards are allocated automatically. If the colour and/or sound is not correct, select the row »Standard« with button »▲« or »▼« then select the required setting with the »◀« or »▶« button.

5 Fine-tune the picture if necessary. For this, select the »Finetune« row with »▲« or »▼« then use »◀« or »▶« to alter the finetuning.

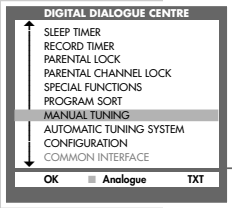
6 Save the setting with »**OK**«.

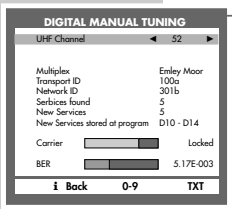
Note:
To programme further channels, repeat steps **3** to **6**.

7 Press »**TXT**« to end the setting.

SPECIAL SETTINGS

Programming digital TV services manually





This setting is only required if, for example, a cable provider adds a new service and you wish to keep your favourite service order.

1 »Call up the »DIGITAL DIALOGUE CENTRE« by pressing »i« and then »**OK**«.
– The »DIGITAL DIALOGUE CENTRE« appears on the picture screen.

2 Select the »MANUAL TUNING« row from the »DIGITAL DIALOGUE CENTRE« with »▲« or »▼« then confirm with »**OK**«.

3 Enter the channel position with the buttons »**1...0**«.
– The digital TV channels offered under this channel number are automatically transferred in the programme chart.
– Information about the data transfer is given by the following menu rows:

Multiplex	– System information
Transport ID	– System information
Network ID	– System information
Services found	– number of digital services found.
New Services	– new services among the found services.
New Services stored at program	– channel positions on which the new digital services are stored.

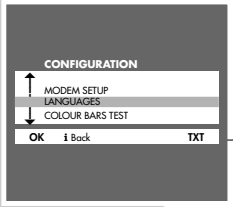
Note:
To programme further digital services, repeat step **3**.

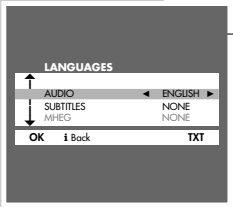
4 Press »**TXT**« to end the setting.

ENGLISH

SPECIAL SETTINGS

Selecting the language and subtitles for digital services





1 Call up the »DIGITAL DIALOGUE CENTRE« by pressing »i« and then »OK«.

2 Select the »CONFIGURATION« row with »▲« or »▼« then confirm with »OK«.

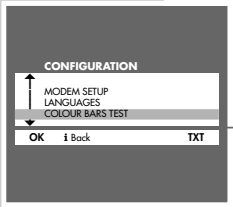
3 Select the »LANGUAGES« row from the »CONFIGURATION« menu with »▲« or »▼« then confirm with »OK«.
– The »LANGUAGES« menu appears on the picture screen, the »AUDIO« row is highlighted.

4 Select the desired language with »◀« or »▶«.

5 Select the »SUBTITLES« row with »▲« or »▼« then use »◀« or »▶« to select the subtitles.

6 Press »TXT« to end the setting.

Selecting the colour bars test for displaying the digital picture quality



1 Call up the »DIGITAL DIALOGUE CENTRE« by pressing »i« and then »OK«.

2 Select the »CONFIGURATION« row with »▲« or »▼« then confirm with »OK«.

3 Select the »COLOUR BARS TEST« row from the »CONFIGURATION« menu with »▲« or »▼« then confirm with »OK«.
– The »COLOUR BARS TEST« appears on the picture screen.

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INFORMATION

DVB Common Interface:

2 x

RS 232:

Service and future expansion for update via PC.

Modem:

V 22, V 22 bis
complys to NTR 3
REN =1

APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them.

610107

ENGLISH
65

Service- und Sonderfunktionen

Die Analog-Software für die Service- und Sonderfunktionen der Punkte 1 – 9 befindet sich im Prozessor IC81050 und EEPROM IC82005.

1. Einschaltfunktionen

1.1 ATS-Reset (**A**utomatic **T**uning **S**ystem)
Netzschalter "EIN" mit gedrückter Fernbedientaste "**L+**" –> OK.
Das Automatische Sendersuchsystem stoppt bei jedem empfangswürdigen Sender (AFC und Koinzidenz) und speichert automatisch die entsprechenden Senderdaten mit dem jeweiligen Standard (die Speicherung findet unmittelbar im NVM statt). Danach wird der Suchlauf fortgesetzt.
Tastendruck "TXT" bricht den ATS-Lauf ab.

1.2 Mittelwerte / Notdatensatz laden (ROM-Daten)
Fernbedientaste "**P-**" gedrückt halten und das Gerät mit dem Netzschalter einschalten. Dadurch wird z. B. nach Austausch des IC82005 (NVM) das Gerät mit dem Notdatensatz gestartet.
Mit diesem Vorgang werden die Grunddaten aus dem ROM des Prozessors IC81050 in den NVM IC82005 kopiert:

IC82005: (gerätespezifische Daten, über das Dialog Center einstellbar)
- Farb- und Ton-Normen
- Zwangs-Mono
- Umkehrpunkt
- OSD Position
- Blue Screen on/off, Black Screen on/off
- ATS-Reset
- Hotel-Mode on/off
- AGC
- Öko-Schalter
- Bildröhrentype
- Analogwerte (Lautstärke, Helligkeit usw.)
- Bildschärfe
- Overscan
- Security on/off
- Geometrieabgleich
- Programmdaten (Kanal- Feinabstimmung, Senderkennung)

Danach über das Dialog Center die persönlichen Werte, Bildgeometrie eingeben.

1.3 Programmsperre dauerhaft aufheben
Die Zahl **7038** hebt die Sperre dauerhaft auf.

2. Sonderfunktionen im Dialog Center

2.1 Einschalten mit Programm "1" oder "AV"
Mit Taste "**i**" die Dialogzeile "TV einsch. mit" über "DIALOG CENTER" –> "SONDERFUNKTIONEN" aufrufen. In Stellung "AV1" erscheint beim Einschalten das AV-Bild.

2.2 "Bild-/Ton-Skala" ein oder aus für alle Programme
Mit Taste "**i**" die Dialogzeile "Bild-/Toneinst." über "DIALOG CENTER" –> "SONDERFUNKTIONEN" aufrufen. In Stellung "aus" erscheinen keine Balkenanzeigen für die Analogwerte auf dem Bildschirm.

2.3 Automatische Lautstärkeregelung (optionell)
Mit Taste "**i**" die Dialogzeile "Autom. Lautst." über "DIALOG CENTER" –> "SONDERFUNKTIONEN" aufrufen. In Stellung "ein" wird bei großen Senderhüben die Lautstärke automatisch an den normalen Hub angepaßt.

2.4 Öko-Netzschalter aktivieren bzw. deaktivieren (optionell)
Mit Taste "**i**" die Dialogzeile "Eco-Switch" über "DIALOG CENTER" –> "SONDERFUNKTIONEN" aufrufen. Mit den Tasten ▶ ◀ "1h…3h" stellen.
Das Gerät schaltet sich nach der eingestellten Zeit oder durch zweimaligen Tastendruck der Taste ⏻ aus dem Standby-Betrieb komplett ab.
In Stellung "aus" wird diese Funktion nicht genutzt.

3. Bild-Einstellungen

Grundeinstellung
Mit der roten Taste (Auge) das Bild-Menü aufrufen. Über die Menüführung ist die Regulierung von Kontrast, Bildschärfe und Tint (nur bei NTSC-Quellen) möglich.
Die Analogwerte für Kontrast, Bildschärfe und Tint werden beim Verlassen des Menüs automatisch gespeichert.

4. Ton-Einstellungen

4.1 Tonumschaltung
Mit der blauen Taste (Ohr) das Ton-Menü aufrufen. Je nach Sendernorm sind für die Tonumschaltung verschiedene Einstellungen anwählbar:
- "Mono": bei reinen Mono-Sendungen
- "Mono A / Mono B": bei 2-Ton-Sendungen
- "Stereo / Mono": bei schlechtem Stereo-Ton kann auf Mono geschaltet werden
- "Stereo / Analog"
- "Stereo A / Stereo B / Analog"

Die Werte für Zwangs-Mono, Balance, Bässe, Höhen und ähnliches werden beim Verlassen des Menüs automatisch gespeichert.

4.2 Kopfhörer-Tonumschaltung
Mit der blauen Taste das Ton-Menü aufrufen. Je nach Sendernorm sind für den Kopfhörer verschiedene Einstellungen anwählbar:
- "Mono A / B", unabhängig von den Lautsprechern
- "Stereo A / Stereo B / Analog", unabhängig von den Lautsprechern

Bei allen anderen Einstellungen ist der Kopfhörerton mit dem Lautsprecherton fest gekoppelt.

5. Offene Service-Einstellungen

5.1 Maximale Programmnummer (Umkehrpunkt):
Programmnummer aufrufen, ab der die Programmplätze gesperrt werden sollen. Mit Taste "**i**" die Dialogzeile "MANUELLE ABSTIMMUNG" über das "DIALOG CENTER" aufrufen. Über die Menüführung in der Dialogzeile Kanal "C 00" einstellen. Mit "OK" bestätigen und Menü beenden. Danach können im Programm-Mode mit den Tasten "P+/P-" die nachfolgenden Programme nur bis zu dem mit "C 00" belegten Programmplatz fortgeschaltet werden.

5.2 Farb-Zwangsumschaltung
Mit Taste "**i**" die Dialogzeile "Farbe" über "DIALOG CENTER" –> "SERVICE" aufrufen. Mit den Tasten ▶ ◀ können Sie in schlechter Empfangslage programmplatzbezogen die automatische Farbumschaltung zwangsweise auf "PAL" oder "NTSC" einstellen.

5.3 Blauen Bildschirmhintergrund abschalten
Mit Taste "**i**" die Dialogzeile "Blauer Bildschirm" über "DIALOG CENTER" –> "SERVICE" aufrufen. In Stellung "aus" ist der blaue Hintergrund (z.B. bei fehlendem Antennensignal) abgeschaltet.

5.4 Schwarzer Bildschirm bei der Programmumschaltung
Mit Taste "**i**" die Dialogzeile "Schwarz. Bildschirm" über "DIALOG CENTER" –> "SERVICE" aufrufen. In Stellung "ein" wird der Bildschirm bei Programmwechsel dunkelgeschaltet.

6. Service-Einstellungen für den Fachhandel

6.1 Service Menü
Mit Taste "**i**" das Service Menü über "DIALOG CENTER" –> "SERVICE" –> Service Code aufrufen.
Nach Eingabe der Codezahl "8500" kann der Fachhändler den Geräteabgleich lt. Menüführung durchführen für:
- GEOMETRIE
- WHITE ADJUSTMENT
- AGC
- OSD horizontal
- OSD vertical
- Hotel
- Tube
- Cut-off align

Abgleich: Seite 2-1

6.2 OSD-Lage

Mit Taste "i" die Dialogzeile "OSD" über "DIALOG CENTER" –> "SERVICE" –> Service Code "8500" aufrufen.
Mit den Tasten ▶ ◀ können Sie die horizontale, oder vertikale Lage des Einblend-Menüs verschieben und "mit Speich." sichern.

6.3 Hotel-Mode

6.3.1 Hotel-Mode aktivieren

Mit Taste "i" die Dialogzeile "Hotel" über "DIALOG CENTER" –> "SERVICE" –> Service Code "8500" aufrufen.
Bei aktiviertem "Hotel-Mode" ist:
- der Aufruf des "DIALOG CENTER" mit der Taste "i" nicht mehr möglich.
- die zuletzt eingestellte Lautstärke als maximale Lautstärke gespeichert.

6.3.2 Hotel-Mode ausschalten

Taste "i" der Fernbedienung gedrückt halten und das Gerät mit dem Netzschalter einschalten. Im Menü "SERVICE" Hotel-Mode wieder ausschalten.

6.4 Schutzschaltung deaktivieren

Taste "i" der Fernbedienung gedrückt halten und das Gerät mit dem Netzschalter einschalten. Solange das Service Menü angezeigt wird, wird die Schutzschaltung des Gerätes am Videoprozessor IC34015-(50) nicht ausgewertet.

7. Einstellung der Analogwerte

	Maximalwert	Optimalwert
Helligkeit	63	32
Farbkontrast	63	40
SW-Kontrast	63	48
Lautstärke	63	30
Kopfhörer. Lautst.	63	50
Tint	63	32
Bässe	25	15
Höhen	25	18
Bildschärfe	5	2

Automatische Speicherung der Analogwerte:
Nach ca. 8 Sekunden,
nach Schalten in Standby,
nach Wechsel von TV zu AV,
nach Wechsel der einzelnen AV-Stellungen.

Nach Speicherung der Minimal-Lautstärke erscheint beim Einschalten des Gerätes der Lautstärkebalken für ca. 10 Sekunden.
Mit "AUX" –> "OK" können Sie die Optimalwerte für die Ton- und Bildeinstellungen wiederherstellen.
Die Optimalwerte werden aus dem EEPROM IC82005 geladen.

8. Audio-/Video-Anschlüsse

Überspielmöglichkeiten:

AV 1 –> AV 2 (EURO-AV1 –> EURO-AV2 mit 2 EURO-AV-Buchsen)
AV 2 –> AV 1 (EURO-AV2 –> EURO-AV1 mit 2 EURO-AV-Buchsen)
AV 3 –> AV 1 (Camera –> EURO-AV1 mit 2 EURO-AV-Buchsen)

Die Überspielmöglichkeit wird durch Anwahl Taste "0/AV" der Quelle automatisch aktiviert.

Sicherung einer Überspielung:
Nach Anwahl der Quelle durch Taste "0 /AV" –> Taste "AUX" –> Taste "0/AV", Anzeige "kopieren ein" wird die Überspielung gesichert. Es kann in ein anderes Programm umgeschaltet werden. Wiederholung der Tastenfolge hebt das Sichern der Überspielung auf "kopieren aus".

Hinweise:
- Sind bei AV-Anwahl schon alle Videowege belegt, z.B. weil Copy aktiv ist, wird dies erkannt und auf die nächste technisch mögliche AV-Stellung geschaltet.
- Bei allen AV-Stellungen erscheint kein blauer Bildschirm.

AV-Buchsenbeschaltung

Buchse	Eingang	Ausgang	Schaltsignal
AV1	RGB	-	6/12V (Schaltspg.) +1V (Fastblanking)-Auswertung
	FBAS	FBAS	6/12V
	SBAS (Y/C)	FBAS (gewandelt)	6/12V
AV2	RGB	-	6/12V + 1V Auswertung
	FBAS	FBAS	6/12V
	SBAS (Y/C)	FBAS (gewandelt)	6/12V
AV3 Camera	FBAS	-	5V selbst erzeugt aus Sync.

9. Bildformat-Umschaltung

Mit der Fernbedientaste " ⊟ " kann das Bildformat in Abhängigkeit der Bildschirmgrößen umgeschaltet werden.
Formatumschaltung 4:3 und 16:9 in AV und Programmplatz mit Peribit.
Als Indikator dient die an Pin 8 der AV 1- und AV 2-Buchse anliegende Schaltspannung.
- 4:3-Format 12V
- 16:9-Format 6V
  Für 16:9 Camcorder-Wiedergabe nötig, um die vertikale Dehnung zu kompensieren, da diese keine 16:9 Schaltspannung liefern.
- Panorama-Format 12V
- Cinema-Format 12V
- Automatic-Format 12V
  Nur möglich wenn im Service Menü –> Format switch over –> "manual" eingestellt wurde.

Im Digital-Modus wird bei Programmwechsel immer das 16:9-Format automatisch angewählt.

10. Programmierung der Digital-Software über RS-232 Schnittstelle

10.1 Vorbereitung

Die GRUNDIG-Digital-Software ist über die GRUNDIG-Organisation zu beziehen.
Diese Software **Pcbootld.exe**, **Dos4gw.exe** und das Download-Programm (z.B. Version **gcad1043.s3r**) auf den PC installieren.
Das ausgeschaltete TV-Gerät mit einem PC über die RS-232-Schnittstelle verbinden.
Dazu wird ein Verbindungskabel (handelsüblich) benötigt, an dem jeweils der Pin 2, 3 und 5 der 9-poligen Sub-D-Buchse mit dem 9-poligen Sub-D-Stecker verbunden ist.

10.2 Übertragungseigenschaften:

- Baud rate = 115200
- Parity bits = keine
- Data bits = 8
- Stop bits = 1

10.3 Download der Software

Communications Setup (einmalige Einstellung)
Am PC die Taste "F1" (Comms Setup) drücken –> im geöffneten Menü **Com1** (Communications Port: 1) und die Baud rate **115200** einstellen –> "ESC"-Taste drücken (zurück zum Haupt-Menü).

Die Taste "F2" (Select File) drücken –> Filename z.B. **gcad1043.s3r** des Programms eingeben –> "Return"-Taste drücken.

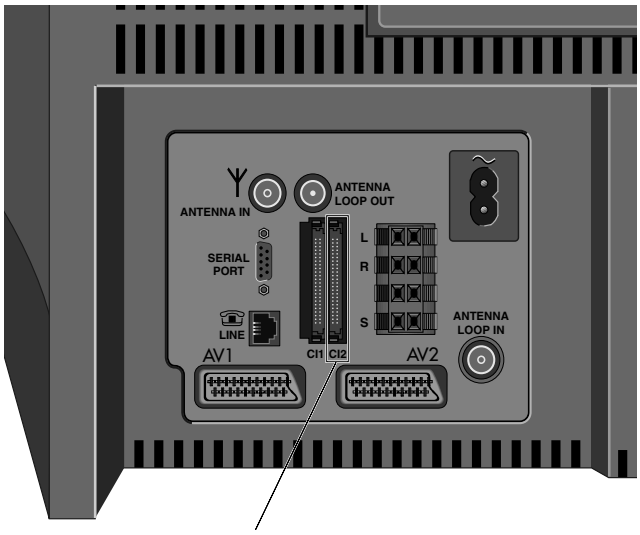
Die Taste "F3" (Download) drücken –> Meldung: "Waiting to download" –> TV-Gerät einschalten und warten bis die Meldung "Ready" erscheint –> TV-Gerät ausschalten und RS-232-Verbindung entfernen.

Das TV-Gerät ist betriebsbereit.

11. Programmierung der Digital-Software über PCMCIA-Card

11.1 Vorbereitung
Die GRUNDIG-Digital-Software ist über die GRUNDIG-Organisation zu beziehen.
Diese Software **Pcbootld.exe**, **Dos4gw.exe** und das Download-Programm (z.B. Version **gcad1043.s3r**) auf dem PC installieren.
Die im PC installierte Digital-Software über einen handelsüblichen PC-Anschlußadapter (PCMCIA-Card-Dock) auf eine ebenfalls handelsübliche Flashcard (PCMCIA-Card) laden.

11.2 Download der Software
Um das TV-Gerät mit der neuen Software zu laden, muß die Flashcard bei ausgeschalteten TV-Gerät in die auf der Rückseite des Gerätes befindlichen Buchse CI2 (Common Interface Slot 2) gesteckt werden.



Common Interface Slot 2

Nach dem Einschalten des TV-Gerätes, wird die Software auf der Flashcard erkannt und automatisch geladen. Dabei wird während des ca. 15sec. dauerenden Ladevorgangs auf dem blauen Bildschirm die OSD-Einblendung "Software download" eingeblendet.
Nach dem Ladevorgang schaltet das Gerät automatisch auf TV-Betrieb um.
Das Gerät ausschalten und die Flashcard abziehen.

Auf diese Flashcard kann jederzeit die neueste Digital-Software geladen werden.

Service and Special Functions

The analog software for the Service and Special Functions, points 1 – 9, is stored in the processor IC81050 and EEPROM IC82005.

1. Switching-on Options

1.1 ATS Reset (Automatic **T**uning **S**ystem**)**
Press the power "ON" button while pressing button **"L+"** on the Remote Control –> OK.
The ATS system stops at every station of acceptable reception quality (AFC and coincidence) and stores the station data and the respective standard automatically (data is stored immediately in the NVM). The system then continues searching.
Pressing the "TXT" button stops the ATS function.

1.2 Loading the Average Values / Emergency Data Set (ROM Data)
Press and hold the "**P-**" button on the Remote Control and switch on with the mains button. After replacement of IC82005 (NVM) for example, the TV set is started with the emergency data set.
In doing so, the basic data is read out from the ROM of processor IC81050 and loaded into the NVM IC82005:

IC82005: (data specific to the TV can be set via the Dialog Center):
- chroma and audio standards
- forced mono
- reversing point
- OSD position
- blue screen on/off, black screen on/off
- ATS reset
- Hotel Mode on/off
- AGC
- economy switch
- type of picture tube
- analog values (volume, brightness etc.)
- picture sharpness
- overscan
- security on/off
- geometry adjustment
- programme data (channel finetuning, station ident)

Subsequently enter your personal values, picture geometry via the Dialog Center.

1.3 Cancelling the Parental Lock Continuously
To cancel the parental lock enter the number **7038**.

2. Special Functions in the Dialog Center

2.1 Switching on with Programme "1" or "AV"
Reach the "TV on with" menu with button "**i**" via "DIALOG CENTER" –> "SPECIAL FUNCTIONS". In "AV1" position the TV starts with the AV picture.

2.2 Picture/Sound Options On or Off for all Programmes
Reach the "Pict./sound opt." menu via "DIALOG CENTER" –> "SPECIAL FUNCTIONS" by pressing button "**i**". When selecting "off" the scales indicating the analog values do not appear.

2.3 Automatic Volume Control (option)
Reach the "Volume Limiter" dialog via "DIALOG CENTER" –> "SPECIAL FUNCTIONS" by pressing button "**i**". The volume of stations with large deviation is adjusted to normal deviation when selecting "on".

2.4 Activating or Deactivating the Economy Mains Switch (option)
Reach the "Economy mains switch" menu with button "**i**" via "DIALOG CENTER" –> "SPECIAL FUNCTIONS". With the buttons ▶ ◀ select "1h…3h".
The TV receiver switches off completely from Standby mode at the predetermined time or by pressing the mains button ⏻ twice.
This function is not used when "off" is selected.

3. Picture Settings

Basic Adjustment
Call up the picture settings menu with the red button (eye). Via the menu guide it is possible to change the contrast, picture sharpness and tint (only NTSC sources).
The analog values for contrast, picture sharpness and tint are stored automatically when leaving the menu.

4. Sound Settings

4.1 Sound Switching:
Call up the sound settings menu with the blue button (ear). Different types of sounds are available dependent on the TV standard:
- "Mono": in the case of pure mono transmissions
- "Mono A / Mono B": in the case of 2-channel sound transmissions
- "Stereo / Mono": in the case of poor stereo sound quality, the sound can be switched over to mono
- "Stereo / Analog"
- "Stereo A / Stereo B / Analog"

The forced-mono, balance, bass, treble and similar values are stored automatically when leaving the menu.

4.2 Headphone Sound Switching
Call up the sound settings menu with the blue button. Dependent on the TV standard, different settings are possible for the headphones:
- "Mono A / B", independent of the loudspeakers
- "Stereo A / Stereo B / Analog", independent of the loudspeakers

With all other options, separate selection of the sound for the headphones and loudspeakers is not possible.

5. Open Service Settings

5.1 Maximum Programme Number (reversing point)
Call up the programme number which is to be the highest selectable programme position. With button "i" select the dialog line "MANUAL TUNING" via the "DIALOG CENTER". Following the menu guide, enter "C 00" in the dialog line channel. Confirm with "OK" and terminate the menu. After this setting only those programme positions can be selected with the "P+/P-" buttons in Programme Mode which are lower than the "C 00" position.

5.2 Forced Chroma Switching
Call up the dialog line "Color" via "DIALOG CENTER" –> "SERVICE" with button "i". With the buttons ▶ ◀ it is possible to force the automatic chroma standard switching function into "PAL" or "NTSC" on a per-programme basis under poor reception conditions.

5.3 Switching off the Blue Screen Background
Call up the dialog line "Blue Screen" via "DIALOG CENTER" –> "SERVICE" with button "i". When this function is set to "off" the blue background is switched off (e.g. when the aerial signal is missing).

5.4 Black Screen when Changing the Programme
Call up the dialog line "Black Screen" via "DIALOG CENTER" –> "SERVICE" with button "i". When this function is set to "on" the screen is blanked when changing the programme.

6. Service Settings for the Dealer

6.1 Service Menu
Call up the Service Menu with button "i" via "DIALOG CENTER" –> "SERVICE" –> Service Code .
Having entered the code number "8500" the dealer can change the following settings under menu guide:
- GEOMETRY
- WHITE ADJUSTMENT
- AGC
- OSD horizontal
- OSD vertical
- Hotel
- Tube
- Cut-off align
- Overscan
- NTSC 3,6

Alignment: page 2-3

6.2 OSD Position
Call up the dialog line "OSD" with button "i" via "DIALOG CENTER" –> "SERVICE" –> Service Code "8500".
With the ▶ ◀ buttons it is possible to shift the on screen display in the horizontal or vertical direction and to store this position "with mem.".

6.3 Hotel Mode

6.3.1 Activating the Hotel Mode
Call up the dialog line "Hotel" with button "i" via "DIALOG CENTER" –> "SERVICE" –> Service Code "8500".
With activated "Hotel Mode":
- it is no longer possible to call up the "DIALOG CENTER" menu with button "i".
- the last volume setting is stored as the maximum level possible.

6.3.2 Deactivating the Hotel Mode
Depress and hold button "i" on the Remote Control while switching the TV set on with the mains switch. Under the "SERVICE" menu switch the Hotel Mode off.

6.4 Deactivating the Protection Circuit
Depress and hold button "i" on the Remote Control while switching the TV set on with the mains switch. As long as the Service Menu is displayed the protection circuit of the TV set is not evaluated on video processor IC34015-(50).

7. Setting the Analog Values

	Maximum	Optimum
Brightness	63	32
Colour contrast	63	40
Black/white contrast	63	48
Volume	63	30
Headphone volume	63	50
Tint	63	32
Bass	25	15
Treble	25	18
Sharpness	5	2

The analog values are stored automatically:
after about 8 seconds,
on switching to Standby mode,
on switching over from TV to AV mode,
on changing the individual AV settings.

Having stored the minimum volume level the volume indicator bar is displayed for about 10 seconds when switching the TV receiver on.
With "AUX" –> "OK" it is possible to re-set the optimum values for picture and sound.
The optimum values are read out from EEPROM IC82005.

8. Audio / Video Connectors

Re-recording possibilities:

AV 1	–>	AV 2 (EURO-AV1 –> EURO-AV2 with 2 AV sockets)
AV 2	–>	AV 1 (EURO-AV2 –> EURO-AV1 with 2 AV sockets)
AV 3	–>	AV 1 (Camera –> EURO-AV1 with 2 AV sockets)

Re-recording is activated automatically by selecting button "0/AV" of the source.

Securing a re-recording:
A re-recording is secured by selecting the source with button "0 /AV" –> button "AUX" –> button "0/AV", indication "copy on". The programme can be changed. The securing function can be cancelled by repeating this sequence: "Copying off".

Notes:
- Should all video signal paths be in use on selection of AV because Copy is active for example, this situation is identified and the TV switches over to the next technically possible AV position.
- The blue screen background does not appear in all AV settings.

AV socket configuration

Socket	Input	Output	Switching Signal
AV1	RGB	-	6/12V (switching voltage) +1V (fastblanking) evaluation
	CCVS	CCVS	6/12V
	SCVS (Y/C)	CCVS (converted)	6/12V
AV2	RGB	-	6/12V + 1V evaluation
	CCVS	CCVS	6/12V
	SCVS (Y/C)	CCVS (converted)	6/12V
AV3 Camera	CCVS	-	5V generated from sync

9. Changing the Picture Format

Dependent on the size of the screen the picture format can be changed using button " ⊟ " on the Remote Control.
The picture format is changed between 4:3 and 16:9 in AV mode and on the programme position with Peribit.
This status is indicated by the switching voltage applied to pin 8 of the AV 1 and AV 2 socket.

- 4:3 format 12V
- 16:9 format 6V
  Is necessary for playing back from a camcorder in 16:9 format to compensate for the vertical expansion because camcorders do not supply the 16:9 switching voltage.
- Panorama format 12V
- Cinema format 12V
- Automatic format 12V
  Only possible when the format is set as follows: Service Menu –> Format switch over –> "manual".

In digital mode, the 16:9 format is always selected automatically when changing the programme.

10. Programming the Digital Software via the RS-232 Interface

10.1 Preparation
The GRUNDIG Digital Software is available from the GRUNDIG organisation.
Install this software, **Pcbootld.exe**, **Dos4gw.exe**, and the download programme (e.g. version **gcad1043.s3r**) on the PC.
Connect the switched off TV set via the RS-232 interface with the PC. For this, a connecting cable (commonly available) is necessary which connects pins 2, 3 and 5 of the 9-pin Sub-D socket with the same pins of the 9-pin Sub-D plug.

10.2 Transfer Specifications:
- Baud rate = 115200
- Parity bits = keine
- Data bits = 8
- Stop bits = 1

10.3 Downloading the Software
Communications Setup (setting made once)
Press button "F1" (Comms Setup) on the PC –> enter **Com1** (Communications Port: 1) and the baud rate **115200** in the open menu –> press button "ESC" (to return to the main menu).

Press button "F2" (Select File) –> enter the File Name of the programme e.g. **gcad1043.s3r** –> press the "Return" button.

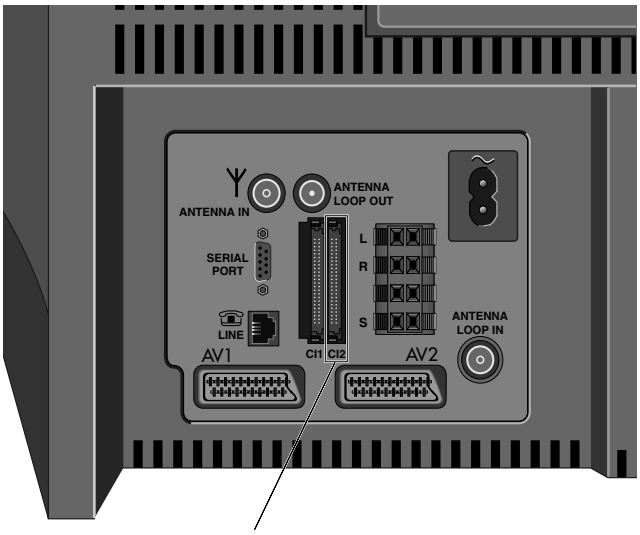
Press button "F3" (Download) –> message: "Waiting to download" –> switch the TV set on and wait for the message "Ready" to appear –> switch the TV set off and undo the RS-232 connection.

The TV set is ready for operation.

11. Programming the Digital Software via the PCMCIA-Card

11.1 Preparation
The GRUNDIG Digital Software is available from the GRUNDIG organisation.
Install this software, **Pcbootld.exe**, **Dos4gw.exe**, and the download programme (e.g. version **gcad1043.s3r**) on the PC.
Load the Digital Software installed on the PC via a commonly available PC connecting adapter (PCMCIA-Card-Dock) on to an also commonly available flashcard (PCMCIA-Card).

11.2 Downloading the Software
For storing the new software in the TV set, the flashcard is to be plugged into the socket CI2 (Common Interface Slot 2) on the back of the switched off TV set.



Common Interface Slot 2

On switching the TV set on, the software on the flashcard is identified and automatically loaded. During the loading process lasting about 15sec, the OSD message "Software download" is indicated on the blue screen.
On completion of the loading process the TV switches automatically to normal TV operation.Switch the TV set off and pull the flashcard out.

This flashcard can be loaded at any time with the latest Digital Software.

(D) Abgleich

Achtung!
Nach einer Reparatur bzw. Wechsel des NVM (IC82005) muß kontrolliert werden, ob der NTSC Quarz 3,58MHz bestückt ist. Bei nicht bestücktem Quarz, muß über das Service Menü die Dialogzeile "NTSC 3,6" auf "**aus**" gestellt werden.
Taste "**i**" –> "OK" –> "SERVICE" –> "OK" –> Service Code "8500" –> NTSC 3,6 "aus" und über die Dialogzeile "**End**" mit "**with mem.**" sichern.

Hinweise!
1. Bei Wechsel des IRDT-Modules ist kein Anpassungsabgleich notwendig.

2. Die Geräte mit IRDT-Baustein können auch ohne diesen Baustein betrieben werden. Werden diese Geräte ohne IRDT-Baustein betrieben, muß die Steckverbindung ST-PIP3 zum YUV-Interface gelöst werden und bei Verwendung der Cinch-Eingänge die Steckverbindung ST-CI1 auf dem Keyboard mit der Steckverbindung ST-CI1 auf der Chassisplatte verbunden werden. Das TV-Gerät arbeitet dann nur noch im Analog-Betrieb.

Alle nicht beschriebenen Einstellelemente sind werkseitig abgeglichen und dürfen im Service-Fall nicht verstellt werden.

Chassis- / Bildrohrplatte

Meßgeräte: Zweikanal-Oszilloskop, Tastkopf 10:1, Digitalvoltmeter, Farbgenerator, Spektrumanalyser oder HF-Millivoltmeter.
Geometrieeinstellung mit dem Vertikal-Abgleich beginnen!

Servicearbeiten nach Austausch bzw. Reparatur:
- **Netzteil:** Abgleich 1
- **Tuner:** Abgleich 2
- **NVM IC82005:** Abgleich 2…8, 11
- **Zeilen- und Bildablenkung und Bildrohrwechsel:** Abgleich 10…12
- **Brückenspule L53074:** Nur nach unsachgemäßem Eingriff in der Horizontalablenkung notwendig: Abgleich 9

Abgleich	Vorbereitung	Abgleichvorgang
1. **+A** Spannung	Nach jeder Reparatur und vor jedem Abgleich kontrollieren und gegebenfalls einstellen. Helligkeit: Minimum Digital-Voltmeter: Kathode D61016	**R60037** bzw. **R61313** nach Tabelle (Seite 3-18) im Schaltbild Netz-Chassis einstellen.
2. Tuner-AGC	Spektrumanalyser oder HF-Millivoltmeter symmetrisch an Tunerkontakt 10, 11. Senderbild oder Generator über die Antenne einspeisen, 70…80dBµV. Dialogzeile "AGC" über "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> aufrufen.	Mit den Tasten "◢ -" oder "+ ◣" 102dBµV (360mV$_{ss}$) einstellen. Ersatzweise wird ohne Spektrumanalyser oder HF-Millivoltmeter mit den Tasten "◢ -" oder "+ ◣" das Bild so abgestimmt, daß es gerade zu rauschen beginnt. Dann soweit zurückstellen, bis das Bild wieder rauschfrei wird. Dialogzeile "**End**" mit "**with mem**" beenden.
3. OSD	Dialogzeile "OSD" über "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> aufrufen.	Mit den Tasten "◢ -" oder "+ ◣" das Menü in die Bildmitte stellen. Dialogzeile "**End**" mit "**with mem.**" beenden.
4. Bildröhrentyp (Tube)	Dialogzeile "Tube" über "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> aufrufen.	Mit den Tasten "◢ -" oder "+ ◣" die richtige Bildschirmdiagonale eingeben. Dialogzeile "**End**" mit "**with mem.**" beenden.
5. Overscan	Nur bei IC TDA8843 oder TDA8844 sowie bei Philips-Bildröhren 72cm/84cm in 4:3- und 70cm/82cm in16:9-Format. Dialogzeile "Overscan" über "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> aufrufen.	Mit den Tasten "◢ -" oder "+ ◣" auf "**aus**" stellen. Dialogzeile "**End**" mit "**with mem.**" beenden.
6. NTSC 3,6	Dialogzeile "NTSC 3,6" über "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> aufrufen.	Mit den Tasten "◢ -" oder "+ ◣" je nach Gerät auf "**aus**" oder "**ein**" stellen. Dialogzeile "**End**" mit "**with mem.**" beenden.
7. Mittelpunkt S-Korrektur (Vertical Slope)	Menü "Vertical Slope" über "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> "GEOMETRIE" –> "OK" aufrufen.	Die Mittellinie des Testbildes in der Dialogzeile "Vertical Slope" (typ. 30…33) mit den Tasten "◢ -" oder "+ ◣" so abgleichen, daß sie gerade noch sichtbar ist. Taste "**i**" zweimal drücken (GEOMETRIE –> SERVICE) und Dialogzeile "**End**" mit "**with mem.**" beenden. Die Bildgeometrie stellt sich nach jedem Einschalten auf den zuletzt gespeicherten Wert ein.

Abgleich	Vorbereitung	Abgleichvorgang
8. Horizontale Bildlage (Horizontal Shift)	Helligkeit Maximum Dialogzeile "Horizontal Width" (Bildbreite) über "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> "GEOMETRIE" –> "OK" aufrufen und Bildbreite mit den Tasten "◢ -" oder "+ ◣" verkleinern. Dialogzeile "Horizontal Shift" aufrufen.	Bildinhalt mit den Tasten "◢ -" oder "+ ◣" mittig ins Raster stellen. (Horizontal Width) Bildbreite wieder nach Testbild einstellen. Mit dem Stecker "ST-Shift" am Chassis (optional), das Testbild in die Bildschirmmitte stellen. Dieser Stecker kann je nach Bildröhrenstreuung auch nachbestückt, verdreht aufgesetzt, oder im Widerstandswert verändert werden. Taste "**i**" zweimal drücken (GEOMETRIE –> SERVICE) und Dialogzeile "**End**" mit "**with mem.**" beenden. Die Bildgeometrie stellt sich nach jedem Einschalten auf den zuletzt gespeicherten Wert ein.
9. Brückenspule L53074	Die Brückenspule L53074 wird in der Fertigung abgeglichen und sollte nicht verdreht werden. Dialogzeile "Horizontal Width" über "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> "GEOMETRIE" –> "OK" aufrufen. Horizontal Width (Bildbreite) auf Minimum stellen. Oszilloskop Kanal 1: Kollektor T53001. Oszilloskop Kanal 2: Kathode D53072.	Gleiche Impulsbreite der Oszillogramme kontrollieren und gegebenenfalls mit Spule **L53074** abgleichen. Bildbreite nach Testbild einstellen.
10. Fokus	- Konvergenztestbild einspeisen. - Bildformat auf 16:9 einstellen (bei 16:9 Geräten). - Kontrast (◑) Maximum. - Bildschirmhelligkeit (☼) so einstellen, daß der schwarze Testbildhintergrund sich gerade aufzuhellen beginnt.	Mit dem **Fokusregler** ⛁ auf der Bildrohrplatte die vertikalen Linien ca. 5cm vom rechten und linken Bildrand auf kleinste horizontale Breite einstellen. Die Mittenschärfe darf nicht schlechter als die Randschärfe erscheinen, ggf. mitteln.
11. Weißwert	Grautreppe mit Burst einspeisen. Kontrast (◑) Maximum. Farbkontrast (◕) Mittelwert. Bildschirmhelligkeit (☼) Mittelwert. Dialogzeile "WHITE ADJUSTMENT" über "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" aufrufen.	Mit den Tasten "◢ -" oder "+ ◣" die Werte für "**Grün**" bzw. "**Blau**" so einstellen, daß das Testbild unbunt wird. Kontrolle des Weißabgleichs mit Kontrast Minimum und Maximum. Dialogzeile "**End**" mit "**with mem.**" beenden.
12. Schirmgitterspannung U_{G2}	Dialogzeile "Cut-off align" über "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" aufrufen. Mit "OK" bestätigen.	Mit dem Einstellregler **U_{G2}** auf der Bildrohrplatte den **zuerst** erscheinenden roten, grünen, blauen oder mischfarbenen Strich gerade gut sichtbar einstellen. Mit "**OK**" zurück ins Menü.

GB Alignment

Attention!
After any repair or replacement of NVM (IC82005) check whether the NTSC 3.58MHz quartz is fitted. If it is not, the dialog line "NTSC 3,6" in the Service Menu must be set to "**off**".
Button "**i**" –> "OK" –> "SERVICE" –> "OK" –> Service Code "8500" –> NTSC 3,6 "off" and in dialog line "**End**" store the setting "**with mem.**".

Notes!
1. When changing the IRDT module no matching is necessary.
2. The TV receivers with IRDT Module can also be operated without this module. When operating these TV sets without the IRDT module, the connector ST-PIP3 to the YUV interface is to be detached. When using the Cinch inputs, the connector ST-CI1 on the keyboard is to be connected to the connector ST-CI1 on the chassis board. In this way, the TV set works only in analog mode.

All adjustment controls not mentioned in this description are pre-set at the factory and must not be re-adjusted in the case of repairs.

Chassis / CRT Panel

Measuring instruments: Dual-channel oscilloscope, 10:1 test probe, digital voltmeter, colour video generator, spectrum analyser or RF millivoltmeter

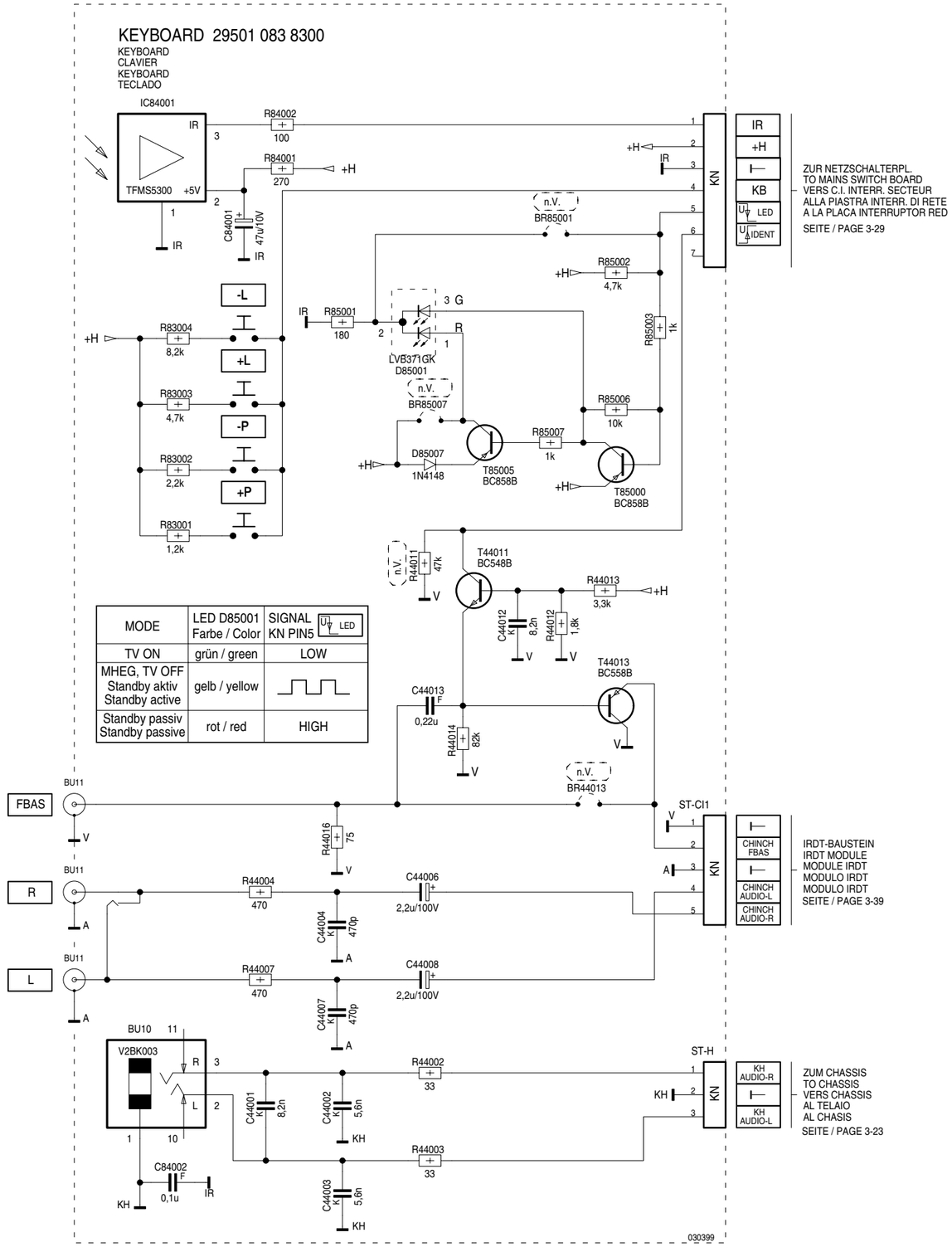
Service works after replacement or repair of the following modules:
- **Power supply:** alignment 1
- **Tuner:** alignment 2
- **NVM IC82005:** alignment 2…8, 11
- **Horizontal and vertical deflection and replaced picture tube:** alignment 10…12
- **Bridge Coil L53074:** only necessary in the case of inexpert manipulation of the horizontal deflection: alignment 9

Alignment	Preparations	Alignment Process
1. **+A** voltage	This voltage must be checked and re-adjusted if necessary after every repair and before every alignment. Brightness: Minimum Digital voltmeter: Cathode D61016	Adjust **R60037** or **R61313** acc. to the table (page 3-18) on the power supply circuit diagram.
2. Tuner AGC	Spectrum analyser or RF millivoltmeter symmetrical to tuner contact 10, 11. Feed in a standard test pattern or generator via the aerial, 70…80dBµV. Call up the dialog line "AGC" via "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500".	Adjust 102dBµV (360mV$_{pp}$) with button "◢ -" or "+ ◣". Alternatively, without using a spectrum analyser or RF millivoltmeter, adjust the picture with button "◢ -" or "+ ◣" so that noise just appears on the screen. Then reset until the picture is again free of noise. Dialog line "**End**", terminate "**with mem**".
3. OSD	Call up the dialog line "OSD" via "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500".	With button "◢ -" or "+ ◣" position the menu in the middle of the picture. Dialog line "**End**", terminate "**with mem.**".
4. Tube (Type of picture tube)	Call up the dialog line "Tube" via "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500".	With button "◢ -" or "+ ◣" enter the correct screen diagonal. Dialog line "**End**", terminate "**with mem.**".
5. Overscan	Only for IC TDA8843 or TDA8844 as well as with Philips picture tubes 72cm/84cm in 4:3 and 70cm/82cm in 16:9 format. Call up the dialog line "Overscan" via "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500".	Set to "**off**" with button "◢ -" or "+ ◣". Dialog line "**End**", terminate "**with mem.**".
6. NTSC 3.6	Call up the dialog line "NTSC 3,6" via "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500".	Set to "**off**" or "**on**" with button "◢ -" or "+ ◣" dependent on the type of television receiver. Dialog line "**End**", terminate "**with mem.**".
7. Vertical Slope	Call up the "Vertical Slope" menu via "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> "GEOMETRY"	Adjust the center line of the test pattern in the dialog line "Vertical Slope" (typ. 30…33) with button "◢ -" or "+ ◣" so that it is just still visible. Press button "**i**" twice (GEOMETRY –> SERVICE) and terminate the dialog line "**End**" with "**with mem.**". The picture geometry is adjusted to the value last stored whenever the TV set is switched on.

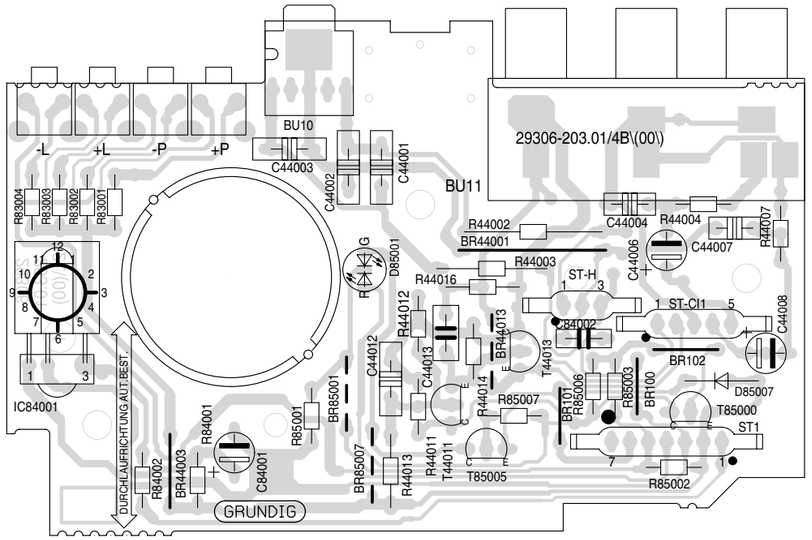
Alignment	Preparations	Alignment Process
8. Horizontal Shift	Brightness Maximum. Call up dialog line "Horizontal Width" via "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> "GEOMETRY" –> "OK" and reduce the width of the picture using button "◢ -" or "+ ◣". Call up dialog line "Horizontal Shift".	Position the picture content in the middle of the raster using button "◢ -" or "+ ◣". Re-adjust the horizontal width according to the test pattern. With connector "ST-Shift" on the chassis (option), position the test pattern in the middle of the screen. Dependent on the scanning spread of the picture tube this connector may be retrofitted, connected the other way round, or the rating of the resistor may be changed. Press button "**i**" twice (GEOMETRY –> SERVICE) and terminate the dialog line "**End**" with "**with mem.**". The picture geometry is adjusted to the value last stored whenever the TV set is switched on.
9. Bridge Coil L53074	Bridge coil L53074 is adjusted in the factory and this setting must not be changed. Call up dialog line "Horizontal Width" via "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500" –> "GEOMETRY" –> "OK". Set Horizontal Width to minimum. Oscilloscope channel 1: collector T53001. Oscilloscope channel 2: cathode D53072.	Check the oscillograms for the same pulse width and re-adjust it if necessary with coil **L53074**. Adjust the horizontal width according to the test pattern.
10. Focus	- Feed in a convergency test pattern. - Set the16:9 picture format (with 16:9 TV sets). - Contrast (◑) to maximum. - Set the screen brightness (☼) so that the black background of the test pattern just starts to brighten.	With **focus control** ⛀ on the picture tube panel, adjust the vertical lines approx. 5cm from the right and left picture edge to minimum horizontal width. The sharpness in the middle must not seem to be worse than the sharpness at the edges. If necessary, take an average.
11. White Balance	Feed in a grey scale test pattern with burst. Contrast (◑) to maximum. Colour contrast (◑) to mid-position. Screen brightness (☼) to mid-position. Call up dialog line "WHITE ADJUSTMENT" via "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500".	With button "◢ -" or "+ ◣" set the values for **"Green"** or **"Blue"** so that the picture becomes achromatic. Check the white balance at minimum contrast and maximum contrast. Terminate the dialog line "**End**" with "**with mem.**".
12. Screen Grid Voltage U_{G2}	Call up dialog line "Cut-off align" via "**i**" (DIALOG CENTER) –> "OK" –> SERVICE –> "OK" –> Service Code "8500". Confirm with "OK".	With adjustment control $\mathbf{U_{G2}}$ on the picture tube panel, adjust the line appearing **first** - red, green, blue or mixed-colour - so that it is just well visible. Return to the menu with "**OK**".

Platinenabbildungen und Schaltpläne / Layout of the PCBs and Circuit Diagrams

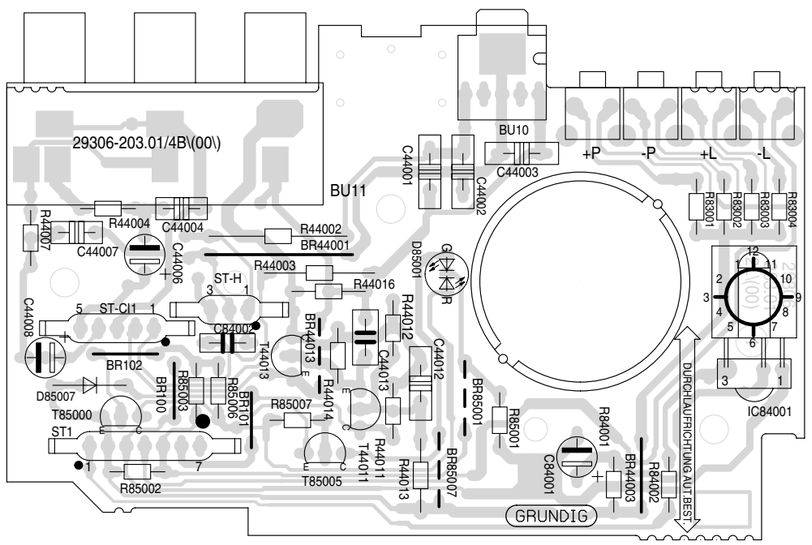
Keyboard



Bestückungsseite, Ansicht von oben / Component Side, Top View



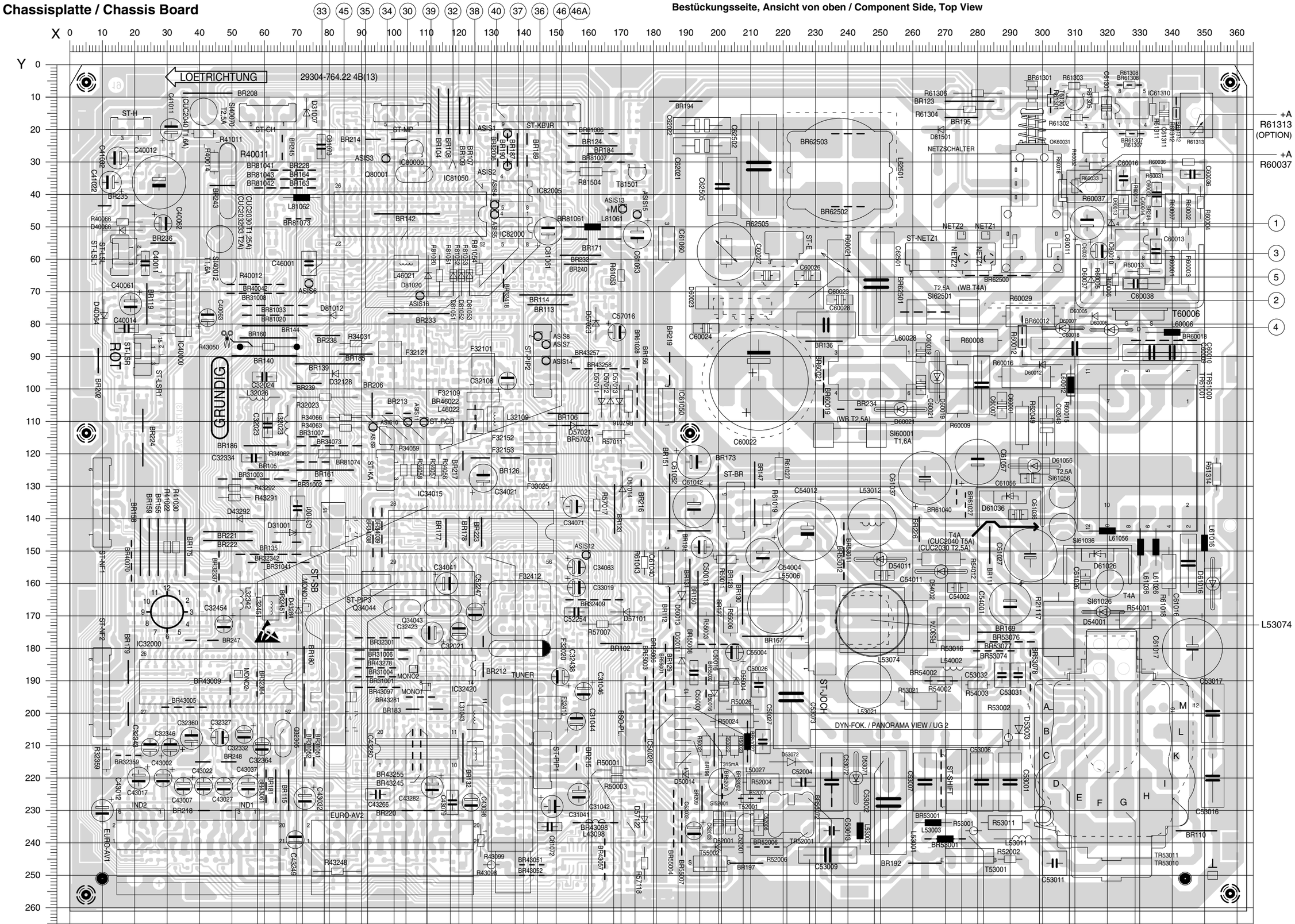
Lötseite, Ansicht von unten / Solder Side, Bottom View



Platinenabbildungen und Schaltpläne / Layout of the PCBs and Circuit Diagrams

Chassisplatte / Chassis Board

Bestückungsseite, Ansicht von oben / Component Side, Top View



Chassisplatte

Koordinaten für die Bauteile der Bestückungsseite (Oberseite)

Chassis Board

Coordinates of the Components on the Components Side (Top Side)

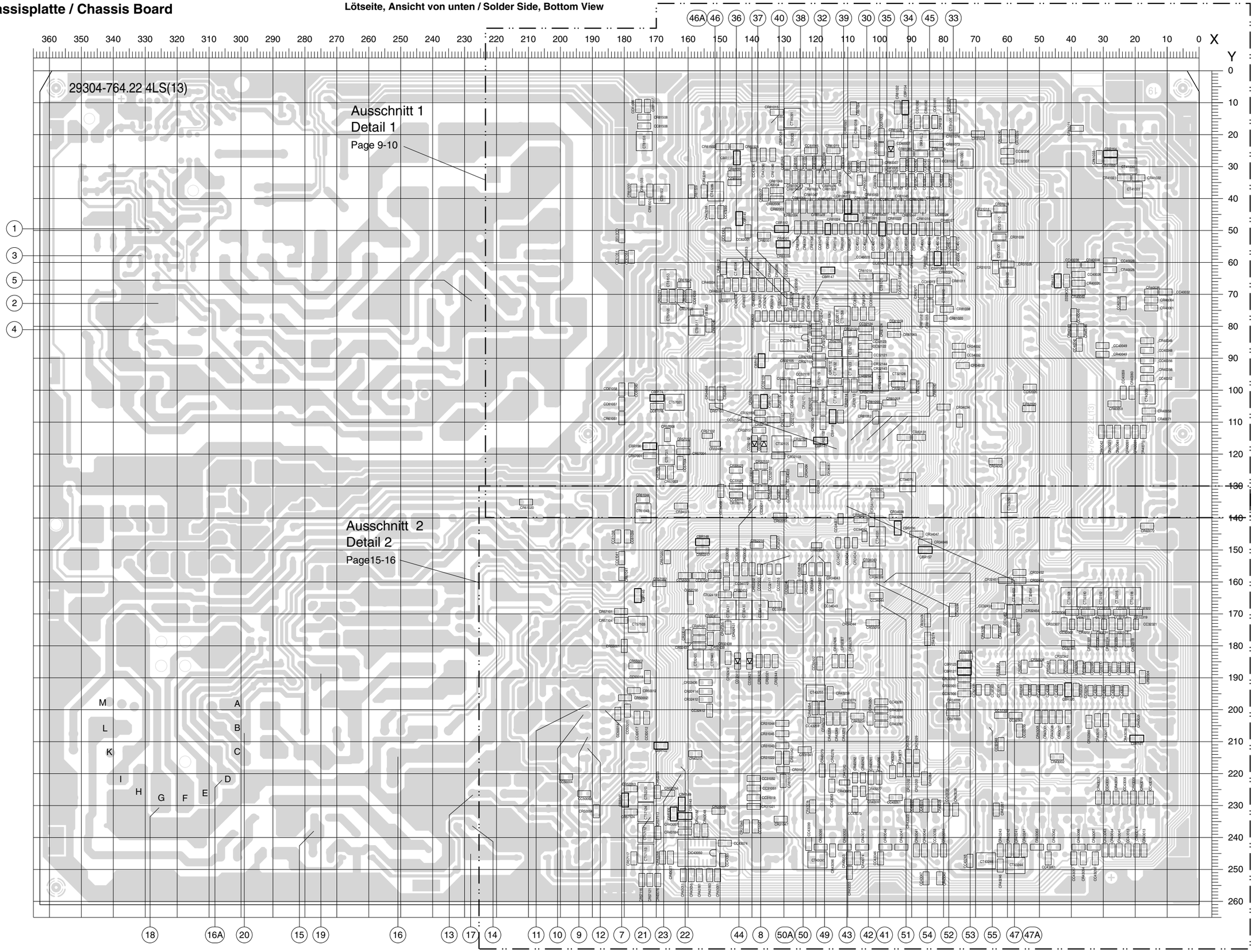
Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates X	Y
AN14	191	114
AN30	344	251
AN31	10	251
ASIS01	135	21
ASIS02	135	31
ASIS03	98	29
ASIS04	131	43
ASIS05	131	46
ASIS06	74	67
ASIS07	147	86
ASIS08	144	83
ASIS09	94	111
ASIS10	104	110
ASIS11	109	110
ASIS12	159	151
ASIS13	170	44
ASIS14	147	91
BR102	170	178
BR104	114	14
BR105	61	125
BR106	154	108
BR107	123	16
BR108	117	14
BR109	120	16
BR110	347	236
BR111	284	148
BR112	185	167
BR113	148	74
BR114	147	71
BR115	68	224
BR119	24	74
BR123	278	11
BR124	161	25
BR126	131	121
BR127	199	167
BR128	203	155
BR129	186	184
BR130	208	165
BR131	191	160
BR132	121	214
BR133	168	137
BR135	67	147
BR136	233	85
BR139	80	92
BR140	60	90
BR142	104	46
BR144	63	81
BR147	211	132
BR150	194	166
BR151	185	136
BR155	27	149
BR156	177	102
BR159	25	149
BR160	61	84
BR161	79	125
BR163	68	38
BR164	71	35
BR167	217	176
BR169	289	175
BR171	161	54
BR173	200	133
BR175	35	149
BR177	116	144
BR178	123	144
BR179	18	194
BR180	72	189
BR181	63	222
BR183	109	199
BR184	167	28
BR185	88	89
BR186	59	117
BR187	138	26
BR189	141	26
BR190	135	26
BR192	264	246
BR194	190	11
BR195	275	16
BR196	199	211
BR197	209	246
BR198	192	144
BR202	9	91
BR206	93	105
BR208	43	9
BR209	195	226
BR212	127	183
BR213	101	108
BR214	98	23
BR215	156	214
BR216	176	126
BR217	121	117
BR218	45	230
BR219	185	94
BR220	108	230
BR221	49	144
BR222	49	147
BR223	127	144
BR224	23	115
BR225	71	48
BR226	262	143
BR228	71	33
BR232	158	59
BR233	108	77
BR234	240	106
BR235	14	43
BR236	29	55
BR238	80	84
BR239	73	98
BR240	158	62
BR243	47	37
BR245	65	25
BR246	335	49
BR247	41	177
BR248	45	215
BR31001	94	189
BR31002	74	128
BR31003	56	128
BR31004	94	186
BR31006	96	181
BR31007	75	115
BR31008	57	71
BR31051	75	211
BR31052	73	211
BR32301	97	177
BR32337	46	156
BR32342	61	151
BR32359	18	213
BR32364	58	191
BR32409	162	165
BR32418	134	67
BR34038	94	144
BR34039	96	144
BR40070	19	153
BR43045	61	87
BR43051	142	247
BR43052	142	250
BR43057	165	245
BR43061	61	222
BR43097	95	192
BR43098	162	234
BR43245	108	211
BR43255	106	211
BR43257	160	90
BR43258	164	94
BR43278	96	183
BR43281	108	195
BR46022	125	109
BR50027	209	209
BR52002	210	226
BR52006	215	241
BR53001	269	220
BR53011	239	150
BR53076	289	178
BR53077	287	178
BR53078	296	187
BR54002	269	190
BR55001	184	188
BR55002	196	190
BR55003	177	199
BR55004	186	233
BR55006	180	196
BR55007	189	235
BR57021	155	111
BR60012	294	84
BR60021	233	99
BR61027	276	136
BR61028	175	100
BR61307	328	21
BR61308	327	6
BR61312	341	15
BR62500	286	65
BR62501	264	76
BR62502	241	45
BR62503	239	25
BR81006	161	21
BR81007	162	30
BR81020	63	77
BR81033	63	74
BR81041	69	33
BR81042	66	38
BR81043	68	35
BR81061	161	50
BR82006	132	26
C31001	70	137
C31041	149	229
C31042	157	225
C31044	156	203
C31046	159	193
C32021	120	175
C32023	61	111
C32024	60	96
C32108	135	98
C32327	46	207
C32332	54	206
C32334	57	121
C32343	24	210
C32346	31	210
C32360	37	208
C32364	60	210
C32423	112	175
C33019	156	161
C34021	127	128
C34041	116	160
C34063	156	155
C40011	23	61
C40012	28	36
C40014	18	81
C40061	19	74
C40062	29	49
C40063	42	78
C41011	31	20
C41022	13	36
C41032	15	29
C43002	29	220
C43007	35	222
C43012	10	230
C43017	21	220
C43022	42	222
C43027	48	222
C43032	73	226
C43037	55	222
C43079	118	228
C43098	124	228
C43249	69	239
C43266	95	225
C43282	112	223
C46001	74	61
C50013	195	149
C50016	202	191
C50026	213	191
C50027	214	209
C52001	204	234
C52002	193	236
C52003	200	234
C52004	226	221
C52006	213	234
C52247	125	169
C52254	156	169
C53001	290	221
C53002	253	228
C53006	281	221
C53007	264	221
C53009	234	244
C53011	304	246
C53013	235	236
C53016	353	220
C53017	353	200
C53031	292	188
C53032	288	188
C53072	235	221
C53073	222	195
C54001	290	166
C54002	274	161
C54004	214	151
C54011	251	158
C54012	228	143
C55003	192	188
C55004	205	182
C57016	169	82
C60001	288	105
C60002	335	40
C60007	281	99
C60009	334	89
C60010	340	89
C60011	314	49
C60013	335	58
C60014	325	44
C60016	325	35
C60022	213	98
C60023	238	73
C60024	196	81
C60026	228	65
C60027	215	65
C60036	346	34
C60037	317	57
C60038	329	68
C61016	345	154
C61017	346	179
C61026	313	159
C61027	296	152
C61036	292	139
C61037	264	128
C61042	192	136
C61052	192	123
C61056	296	127
C61057	280	123
C61063	175	52
C61301	320	13
C61311	338	15
C62021	195	25
C62022	195	19
C62048	301	111
C62501	249	68
C62502	213	31
C62505	201	38
C81061	148	52
C81072	148	235
C81073	78	25
D31001	69	144
D31007	73	15
D32128	82	95
D40064	10	77
D40066	16	51
D43284	71	168
D43292	53	140
D50011	189	184
D50013	189	164
D50014	190	219
D50016	199	194
D52001	200	241
D53003	293	205
D53071	242	220
D53072	222	215
D54001	319	169
D54002	269	156
D54011	250	152
D55004	206	190
D57011	164	104
D57012	167	104
D57013	169	104
D57014	170	131
D57021	155	111
D57023	162	80
D57101	172	169
D57122	177	233
D60005	316	78
D60006	321	82
D60007	306	81
D60012	300	93
D60013	321	49
D60023	213	73
D60037	315	66
D61016	353	160
D61026	317	154
D61036	290	136
D61056	298	124
D81012	81	77
D81020	110	65
D81051	118	65
D81052	121	65
D81053	123	65
D81501	269	20
EU-AV01	39	244
EU-AV02	99	244
F32020	139	180
F32101	127	93
F32109	127	102
F32121	99	89
F32410	148	198
F32412	139	168
F33025	145	125
IC32000	45	190
IC32420	116	185
IC34015	124	144
IC40000	33	74
IC43280	107	211
IC50020	187	205
IC60010	328	54
IC61040	184	155
IC61050	184	105
IC61060	184	55
IC61310	328	13
IC80000	106	25
IC81050	105	46
IC82000	138	50
IC82005	138	39
IND01	55	231
IND02	22	231
L31043	125	201
L32023	67	111
L32026	58	102
L32109	131	109
L32342	53	165
L43098	162	234
L46021	104	61
L46022	125	110
L50027	209	209
L53001	270	239
L53002	244	236
L53003	266	234
L53011	294	239
L53012	247	141
L53021	246	191
L53074	247	171
L54002	272	186
L55006	217	167
L60006	340	83
L60012	309	99
L61016	350	148
L61026	335	149
L61036	330	149
L61056	320	144
L62501	238	33
L81062	72	41
MONO01	110	192

Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates	
	X	Y
MONO01-	73	167
MONO02	106	186
MONO02-	52	188
NETZ01	283	53
NETZ02	275	53
NETZSC..	287	35
OK60031	316	24
Q32305	66	208
Q34043	115	167
Q34044	102	167
Q80001	106	34
R21117	305	174
R32023	79	102
R32359	11	213
R34031	88	86
R34056	114	125
R34057	110	125
R34058	106	125
R34059	103	125
R34062	80	121
R34063	85	112
R34066	85	109
R40011	49	36
R40012	49	46
R40066	16	48
R41022	30	149
R41030	33	149
R43098	130	247
R43099	127	239
R43248	83	249
R43291	51	133
R43292	51	131
R50001	169	217
R50003	169	220
R50011	203	152
R50021	196	210
R50022	201	210
R50023	205	210
R50024	205	203
R50026	208	199
R52001	210	226
R52002	290	245
R52004	214	221
R52006	215	241
R53001	279	236
R53002	290	208
R53011	288	234
R53016	272	172
R53021	263	196
R54001	329	171
R54002	269	190
R54003	280	191
R54012	269	152
R55003	196	175
R55006	204	171
R57007	164	173
R57011	168	114
R57016	172	104
R57017	163	136
R57118	177	246
R60001	340	63
R60002	345	45
R60003	345	63
R60004	349	43
R60005	319	66
R60006	322	66
R60007	340	45
R60008	279	85
R60009	274	100
R60012	294	84
R60013	331	64
R60014	329	40
R60015	309	99
R60016	295	96
R60018	306	39
R60021	236	61
R60029	296	78
R60031	335	33
R60032	316	31
R60033	315	35
R60036	345	30
R60037	314	38
R61018	339	156
R61019	215	139
R61027	219	125
R61043	177	153
R61053	170	65
R61301	303	11
R61302	310	16
R61303	310	7
R61304	278	14
R61306	280	9
R61311	334	14
R61312	341	15
R61313	347	16
R61314	354	126
R62049	294	111
R62505	203	58
R81020	114	65
R81051	118	65
R81052	121	65
R81053	123	65
R81054	126	63
R81504	161	33
SI40012	46	54
SI40070	41	15
SI52001	201	221
SI60001	241	114
SI61026	321	160
SI61036	306	142
SI61056	306	133
SI62501	269	76
ST-BR	205	138
ST-CI01	61	15
ST-E	220	57
ST-H	19	19
ST-JOCH	231	174
ST-KB\IR	144	15
ST-LSL	15	59
ST-LSL01	17	58
ST-LSR	22	90
ST-LSR01	24	88
ST-MAS.	353	250
ST-NET01	272	60
ST-NF01	10	135
ST-NF02	10	193
ST-PIP01	146	215
ST-PIP02	146	91
ST-PIP03	101	160
ST-RGB	107	114
ST-SB	81	173
ST-SHIFT	274	221
T52001	208	234
T53001	278	244
T55002	198	246
T60006	316	69
T61301	310	12
T81501	175	34
TR52001	222	231
TR53010	322	213
TR53011	321	210
TR61000	329	118
TR61001	333	121
TUNER	136	222
_BR158	22	149
_BR31041	64	153
_BR32451	67	166
_BR34073	80	117
_BR40042	57	68
_BR43005	35	198
_BR43009	49	193
_BR52001	201	222
_BR53001	270	239
_BR53012	239	152
_BR53072	235	221
_BR53074	285	181
_BR60018	338	85
_BR60019	233	102
_BR61040	274	132
_BR61301	303	11
_C32438	151	189
_C32454	48	173
_C34071	155	136
_C60018	310	88
_C60019	263	89
_C60021	263	99
_C60028	233	80
_D60019	267	96
_D60021	256	106
_F32152	145	115
_F32153	145	119
_L31041	125	213
_L32451	62	167
_L60028	247	95
_L81061	161	50
_R40014	44	30
_R41011	41	21
_R53074	260	174
_R61305	316	10
_R61307	328	21
_R61308	327	6
_ST-KA	97	125
_ST-MP	102	15

CUC 2058 D / 2059 D

Chassisplatte / Chassis Board

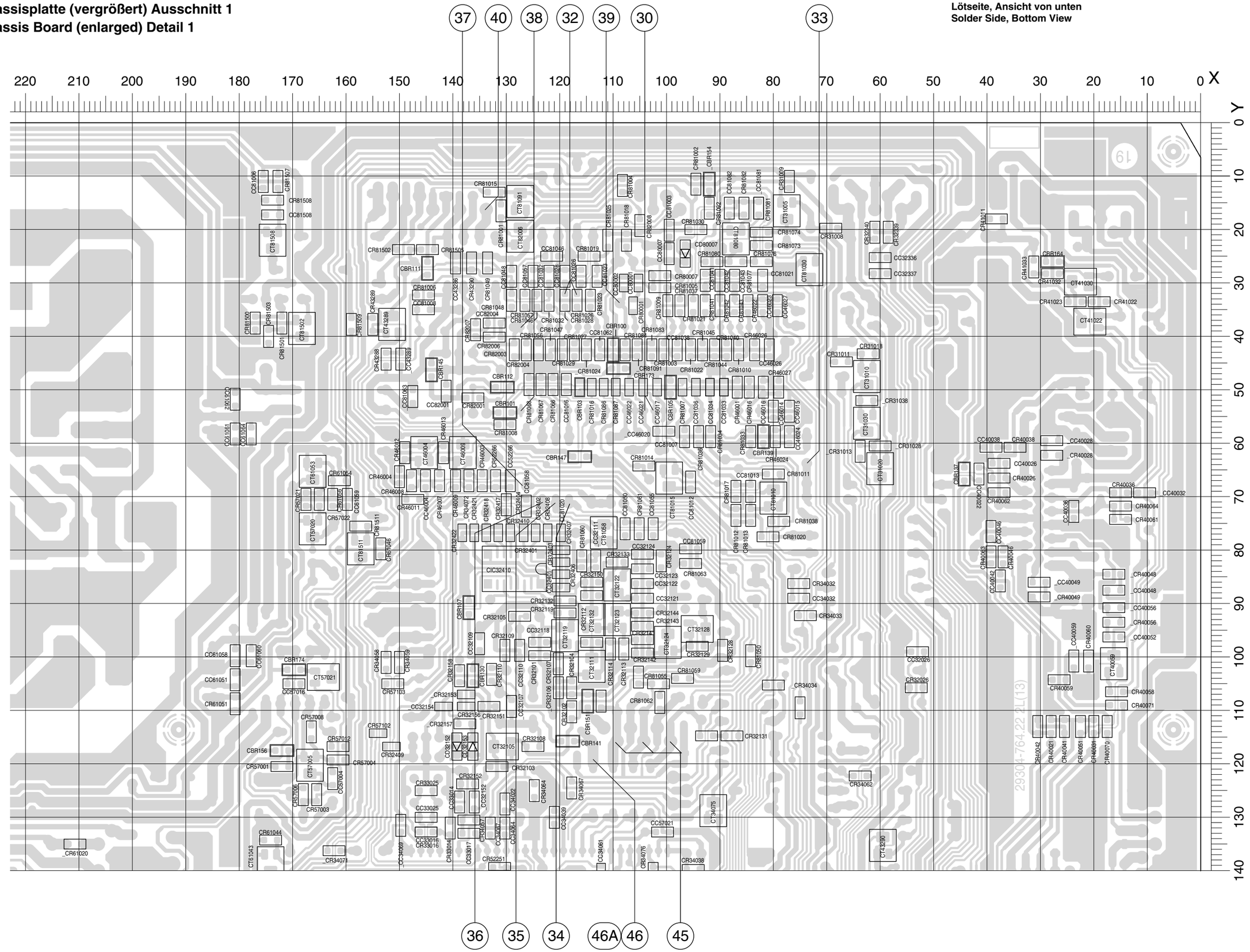
Lötseite, Ansicht von unten / Solder Side, Bottom View



Platinenabbildungen und Schaltpläne / Layout of the PCBs and Circuit Diagrams

Chassisplatte (vergrößert) Ausschnitt 1
Chassis Board (enlarged) Detail 1

Lötseite, Ansicht von unten
Solder Side, Bottom View



Chassisplatte

Koordinaten für die Bauteile der Lötseite (Unterseite)

Chassis Board

Coordinates of the components on the Solder Side (Bottom Side)

Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates X	Y
CBR100	110	43
CBR101	130	54
CBR102	168	211
CBR103	116	49
CBR105	99	49
CBR107	137	91
CBR109	165	233
CBR111	145	27
CBR112	131	49
CBR120	41	194
CBR121	73	188
CBR123	73	186
CBR130	136	103
CBR136	94	143
CBR137	44	66
CBR139	82	59
CBR141	117	109
CBR143	161	233
CBR145	144	46
CBR146	176	164
CBR147	116	63
CBR148	156	148
CBR149	162	229
CBR151	112	108
CBR156	172	117
CBR157	86	150
CBR161	20	209
CBR164	28	26
CBR167	180	228
CBR173	109	46
CBR174	170	102
CC31019	140	228
CC31051	140	224
CC31052	140	222
CC32026	53	99
CC32109	135	98
CC32110	127	99
CC32118	124	97
CC32121	105	89
CC32122	105	86
CC32123	105	84
CC32124	105	81
CC32301	61	194
CC32302	62	202
CC32303	66	194
CC32304	73	195
CC32306	69	194
CC32307	40	173
CC32308	40	169
CC32309	32	187
CC32310	29	187
CC32311	35	173
CC32312	35	169
CC32313	30	173
CC32314	27	187
CC32315	24	187
CC32316	30	169
CC32317	25	173
CC32318	25	169
CC32319	21	187
CC32321	20	173
CC32322	20	169
CC32328	41	202
CC32333	56	206
CC32336	60	25
CC32337	60	28
CC32341	41	179
CC32345	35	187
CC32347	34	194
CC32348	62	211
CC32350	42	186
CC32365	58	202
CC32401	120	87
CC32412	155	194
CC32422	119	185
CC33014	139	128
CC33016	145	133
CC33017	137	133
CC33018	145	156
CC33020	133	167
CC33021	152	158
CC33022	148	156
CC33025	145	130
CC34022	130	127
CC34027	113	148
CC34032	75	89
CC34037	119	156
CC34039	121	130
CC34041	110	148
CC34042	105	146
CC34043	116	165
CC34044	101	164
CC34061	112	140
CC34064	130	132
CC34067	133	132
CC40022	42	66
CC40026	38	64
CC40042	38	86
CC40046	39	77
CC43001	49	194
CC43003	29	228
CC43006	52	194
CC43008	23	228
CC43011	28	194
CC43013	22	244
CC43016	31	194
CC43018	15	228
CC43021	43	194
CC43023	89	230
CC43026	46	194
CC43028	86	230
CC43031	23	194
CC43033	83	244
CC43036	26	194
CC43038	79	231
CC43046	100	247
CC43047	86	253
CC43055	149	247
CC43057	39	247
CC43058	33	247
CC43061	47	247
CC43073	108	230
CC43074	149	242
CC43099	122	242
CC43248	72	247
CC43259	120	203
CC43261	95	228
CC43281	99	198
CC43283	115	224
CC43284	77	169
CC43286	140	26
CC46004	145	67
CC46016	82	49
CC46017	102	49
CC46021	104	49
CC46022	107	49
CC46023	82	34
CC46024	77	59
CC46026	81	43
CC46027	79	34
CC50003	192	226
CC50004	198	221
CC50011	179	200
CC50012	173	203
CC50014	182	201
CC50017	176	203
CC52216	132	156
CC52217	133	148
CC52246	128	161
CC52248	124	156
CC52266	129	67
CC55001	161	158
CC57004	163	123
CC57007	157	158
CC57016	170	105
CC57021	101	133
CC61038	182	146
CC61039	179	146
CC61041	181	152
CC61051	181	104
CC61058	181	100
CC61059	160	71
CC61060	178	100
CC61061	181	58
CC61062	181	52
CC61064	178	58
CC80001	105	30
CC80002	108	30
CC80007	99	25
CC81003	99	20
CC81006	175	11
CC81007	97	59
CC81008	145	35
CC81012	96	67
CC81013	84	69
CC81016	119	49
CC81020	120	77
CC81021	82	30
CC81023	113	29
CC81026	116	29
CC81028	119	29
CC81032	122	29
CC81033	89	49
CC81034	92	49
CC81036	94	49
CC81038	98	43
CC81041	93	30
CC81042	90	30
CC81043	87	30
CC81046	122	25
CC81048	129	29
CC81050	108	76
CC81055	102	76
CC81057	125	29
CC81058	126	72
CC81059	96	80
CC81062	113	43
CC81082	88	16
CC81508	174	17
CC82001	141	50
CC82004	132	38
CD32411	144	185
CD32421	141	185
CD80007	97	25
CIC32410	128	84
CIC43050	157	245
CR31003	77	201
CR31006	77	199
CR31008	69	20
CR31009	77	11
CR31011	67	45
CR31019	130	219
CR31021	140	230
CR31022	132	215
CR31029	89	215
CR31039	91	215
CR31041	124	213
CR31042	129	215
CR31043	131	211
CR31044	131	204
CR31045	131	208
CR31046	141	236
CR31047	131	234
CR31048	150	232
CR31051	89	219
CR31052	91	219
CR32021	135	185
CR32026	53	106
CR32101	124	100
CR32102	114	107
CR32103	132	120
CR32104	118	106
CR32105	127	92
CR32107	120	101
CR32108	125	117
CR32109	130	99
CR32110	133	103
CR32111	114	97
CR32112	114	89
CR32113	108	98
CR32114	110	98
CR32119	119	92
CR32124	101	82
CR32128	90	99
CR32129	94	98
CR32131	88	115
CR32132	119	90
CR32133	109	82
CR32141	105	97
CR32142	105	99
CR32143	105	94
CR32144	105	92
CR32150	114	86
CR32300	73	190
CR32301	73	192
CR32302	54	194
CR32303	37	187
CR32304	18	190
CR32306	85	172
CR32307	42	173
CR32309	33	178
CR32310	30	178
CR32311	37	173
CR32313	32	173
CR32314	27	178
CR32315	25	178
CR32317	27	173
CR32318	22	178
CR32319	22	173
CR32334	73	183
CR32335	55	186
CR32336	38	194
CR32337	58	174
CR32338	51	186
CR32339	58	20
CR32340	61	20
CR32360	35	204
CR32364	62	187
CR32401	127	77
CR32402	125	77
CR32403	120	82
CR32404	130	72
CR32406	120	84
CR32407	120	80
CR32408	122	77
CR32409	151	117
CR32410	129	77
CR32411	152	172
CR32412	155	197
CR32416	144	164
CR32417	132	77
CR32418	134	77
CR32419	149	164
CR32420	138	185
CR32431	148	174
CR32432	148	184
CR33014	141	132
CR33018	160	177
CR33019	102	173
CR33020	142	156
CR33025	145	125
CR34032	75	86
CR34033	74	92
CR34038	95	140
CR34039	101	157
CR34040	103	155
CR34041	121	156
CR34042	108	148
CR34043	116	156
CR34044	110	170
CR34046	86	148
CR34047	89	145
CR34058	152	101
CR34059	150	101
CR34061	106	141
CR34062	64	123
CR34064	125	125
CR34067	118	125
CR34076	102	141
CR40021	28	113
CR40026	38	67
CR40031	20	113
CR40041	25	113
CR40046	37	81
CR40051	23	113
CR40058	16	107
CR40059	27	104
CR40060	21	101
CR40061	15	74
CR40062	38	69
CR40063	39	81
CR40064	15	72
CR40070	18	113
CR40071	16	109
CR41011	38	18
CR41022	19	33
CR41023	23	33
CR41032	28	28
CR41033	31	27
CR43001	48	202
CR43002	44	215
CR43003	32	228
CR43006	51	202
CR43008	20	228
CR43011	29	203
CR43013	17	244
CR43016	32	203
CR43018	18	228
CR43021	44	202
CR43023	91	230
CR43026	46	202
CR43028	83	230
CR43031	21	203
CR43033	80	244
CR43036	23	203
CR43038	76	231
CR43040	81	253
CR43041	89	244
CR43042	86	244
CR43043	30	244
CR43044	27	244
CR43045	25	244
CR43046	98	243
CR43047	93	243
CR43048	155	238
CR43051	161	252
CR43052	111	243
CR43053	109	247
CR43054	36	247
CR43055	109	251
CR43056	159	252
CR43057	161	236
CR43058	168	246
CR43061	151	252
CR43062	46	243
CR43063	51	243
CR43066	38	243
CR43067	33	243
CR43072	106	243
CR43073	108	226
CR43074	107	247
CR43095	118	243
CR43096	115	244
CR43097	102	227
CR43181	157	252
CR43182	157	238
CR43183	153	252
CR43184	161	238
CR43241	57	244
CR43242	60	244
CR43243	62	244
CR43246	62	249
CR43247	55	244
CR43249	114	203
CR43250	103	203
CR43254	120	200
CR43255	118	200
CR43256	107	202
CR43257	158	214
CR43258	116	203
CR43259	116	195
CR43261	103	221

Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates X	Y
CR43262	111	223
CR43263	105	221
CR43265	66	175
CR43266	100	221
CR43267	63	231
CR43271	94	219
CR43274	85	178
CR43276	115	219
CR43277	105	226
CR43278	111	203
CR43279	110	199
CR43281	99	200
CR43282	108	221
CR43283	96	219
CR43284	86	222
CR43285	64	175
CR43286	99	202
CR43287	99	204
CR43288	152	44
CR43289	155	38
CR43290	136	26
CR46001	87	49
CR46003	134	67
CR46004	150	66
CR46007	142	67
CR46008	148	67
CR46009	140	67
CR46011	148	71
CR46012	149	62
CR46013	142	62
CR46016	84	49
CR46022	85	34
CR46024	80	59
CR46026	84	43
CR50002	180	196
CR50004	189	232
CR50012	177	194
CR52217	156	150
CR52247	125	161
CR52250	159	165
CR52251	131	139
CR52252	140	156
CR52253	170	226
CR52254	166	226
CR52255	152	174
CR52256	120	149
CR52263	178	225
CR52266	132	67
CR55001	180	180
CR55002	176	186

Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates X	Y
CR57001	172	120
CR57002	169	160
CR57003	166	126
CR57004	161	119
CR57006	168	126
CR57008	167	114
CR57012	161	117
CR57021	167	71
CR57022	165	71
CR57101	181	169
CR57102	154	114
CR57103	151	105
CR57104	181	172
CR57113	169	238
CR57116	175	253
CR57117	177	247
CR57121	172	253
CR57124	178	232
CR61041	181	158
CR61044	174	134
CR61046	153	80
CR61051	181	109
CR61054	161	67
CR61056	163	71
CR80001	106	34
CR80007	101	29
CR81001	131	16
CR81002	94	11
CR81004	108	12
CR81005	101	31
CR81006	145	32
CR81007	97	49
CR81008	130	57
CR81009	100	34
CR81010	86	43
CR81011	80	66
CR81012	87	73
CR81013	84	73
CR81014	104	64
CR81015	132	13
CR81016	114	49
CR81017	87	69
CR81018	108	22
CR81019	115	25
CR81020	81	78
CR81021	95	34
CR81022	96	43
CR81023	114	33
CR81025	111	22
CR81026	117	33

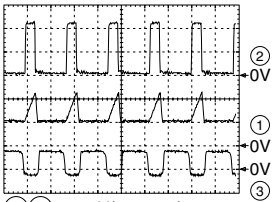
Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates X	Y
CR81027	117	43
CR81028	119	33
CR81029	119	43
CR81030	94	20
CR81031	89	49
CR81032	122	33
CR81033	84	59
CR81034	92	59
CR81035	92	49
CR81036	94	59
CR81037	98	34
CR81038	79	75
CR81039	92	63
CR81040	89	43
CR81041	93	34
CR81042	90	34
CR81043	87	34
CR81044	91	43
CR81045	93	43
CR81046	124	33
CR81047	122	43
CR81048	129	33
CR81049	133	26
CR81050	84	100
CR81055	101	105
CR81056	124	43
CR81057	126	33
CR81059	97	104
CR81060	116	82
CR81061	105	76
CR81062	101	108
CR81063	96	83
CR81066	121	49
CR81067	124	49
CR81068	126	49
CR81072	130	222
CR81073	82	23
CR81074	82	20
CR81076	82	26
CR81077	87	26
CR81081	83	16
CR81082	86	16
CR81083	103	43
CR81084	108	43
CR81086	112	49
CR81087	109	49
CR81500	177	38
CR81501	172	38
CR81502	149	24
CR81503	175	40

Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates X	Y
CR81505	145	24
CR81507	173	11
CR81508	174	15
CR81509	159	38
CR81511	157	76
CR82001	136	52
CR82003	128	43
CR82004	126	43
CR82006	132	40
CR82007	136	39
CR82008	105	19
CT31005	78	16
CT31010	63	48
CT31020	60	65
CT31030	63	56
CT32105	131	117
CT32111	114	102
CT32119	119	96
CT32122	109	86
CT32123	109	93
CT32124	100	97
CT32128	94	95
CT32132	114	93
CT32308	41	165
CT32310	36	165
CT32312	31	165
CT32315	26	165
CT32318	21	165
CT32415	138	169
CT32430	142	169
CT32431	148	169
CT34031	101	146
CT34075	91	129
CT40059	16	101
CT41022	21	37
CT41030	23	30
CT43095	119	247
CT43244	58	249
CT43246	67	247
CT43255	120	195
CT43289	151	38
CT43290	59	135
CT46004	145	62
CT46009	138	62
CT52253	173	226
CT57005	167	120
CT57020	166	76
CT57021	164	104
CT57103	176	173

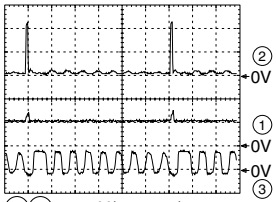
Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates X	Y
CT57112	173	238
CT57113	173	245
CT57124	173	232
CT61043	174	139
CT61053	166	65
CT81010	80	70
CT81015	99	67
CT81030	73	28
CT81058	112	77
CT81080	87	22
CT81091	127	15
CT81502	168	38
CT81508	174	22
CT81511	157	80
CT82006	127	21
OM01	338	9
OM02	28	253
OM30	345	242
OM31	20	251
OM32	300	4
OM40	88	57
_CBR154	92	11
_CC32107	129	109
_CC32111	113	82
_CC32152	136	128
_CC32154	142	109
_CC32411	134	156
_CC32451	63	167
_CC32452	59	169
_CC34069	150	132
_CC34072	148	160
_CC40028	28	59
_CC40032	10	69
_CC40036	24	73
_CC40038	39	61
_CC40048	16	88
_CC40049	30	86
_CC40052	16	96
_CC40056	16	91
_CC40059	24	101
_CC43289	150	44
_CC46020	100	58
_CC50018	173	190
_CC57003	138	156
_CC81063	148	51
_CC81081	83	16
_CD32152	139	117
_CD32153	136	117

Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates X	Y
_CR31013	64	62
_CR31018	62	43
_CR31028	60	61
_CR31038	63	52
_CR32106	120	106
_CR32151	133	109
_CR32152	137	124
_CR32153	138	107
_CR32156	138	109
_CR32157	138	113
_CR32158	139	103
_CR32326	109	185
_CR32327	112	185
_CR32421	136	77
_CR32422	138	77
_CR32426	114	185
_CR32433	157	175
_CR32436	155	192
_CR32437	157	178
_CR32438	153	178
_CR32439	157	180
_CR32441	133	185
_CR32451	61	159
_CR32452	56	157
_CR32453	56	159
_CR32454	57	169
_CR34034	80	105
_CR34071	162	136
_CR34072	137	67
_CR40028	28	62
_CR40036	15	69
_CR40038	35	61
_CR40042	30	113
_CR40048	16	84
_CR40049	30	89
_CR40056	16	94
_CR43004	26	228
_CR43014	20	244
_CR61020	211	135
_CR81003	100	43
_CR81024	115	43
_CR81064	75	109
_CR81065	72	28
_CR81091	106	43
_CR81092	92	16
_CT32435	158	184
_CT32440	153	184
_CT32453	58	164
_CT32454	53	164

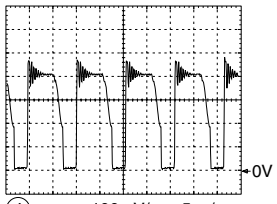
Oszillogramme Chassis / Oscillograms Chassis



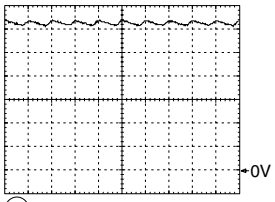
1 3 1V/cm, 5∞s/cm
2 5V/cm, 5∞s/cm



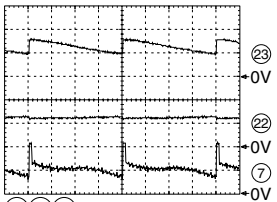
1 3 1V/cm, 5∞s/cm
2 5V/cm, 5∞s/cm
Standby



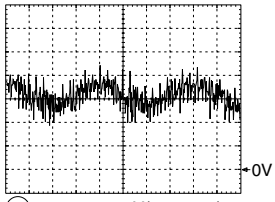
4 100mV/cm, 5∞s/cm



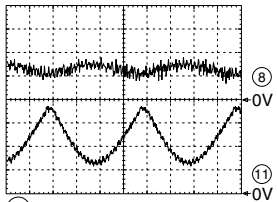
5 50V/cm, 10ms/cm



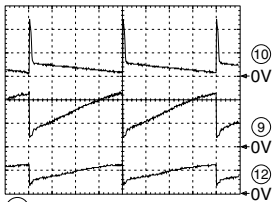
7 22 23 2V/cm, 5ms/cm



8 200mV/cm, 5ms/cm



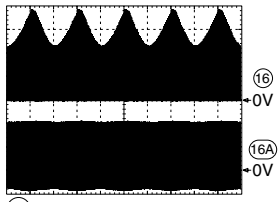
8 500mV/cm, 5ms/cm
11 5V/cm, 5ms/cm



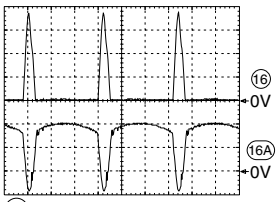
9 5V/cm, 5ms/cm
10 20V/cm, 5ms/cm
12 10V/cm, 5ms/cm

13 10V/cm, 20∞s/cm
49 1V/cm, 20∞s/cm

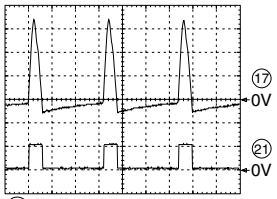
14 5V/cm, 20∞s/cm
15 500V/cm, 20∞s/cm



16 50V/cm, 10ms/cm
16A 100V/cm, 10ms/cm
Bild / Picture

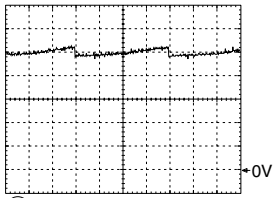


16 50V/cm, 20∞s/cm
16A 100V/cm, 20∞s/cm
Zeile / Line

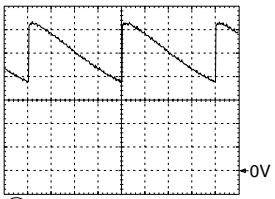


17 20V/cm, 20∞s/cm
21 5V/cm, 20∞s/cm

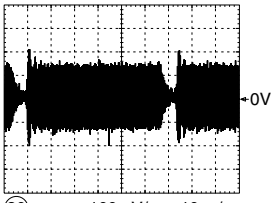
18 20 100V/cm, 20∞s/cm
19 50V/cm, 20∞s/cm



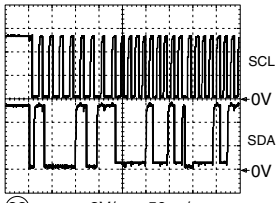
22 500mV/cm, 5ms/cm



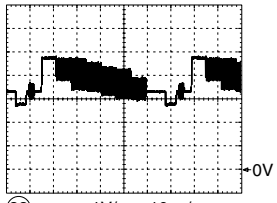
23 500mV/cm, 5ms/cm



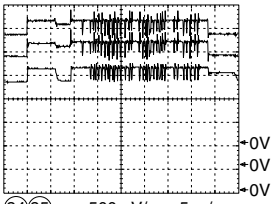
30 100mV/cm, 10∞s/cm



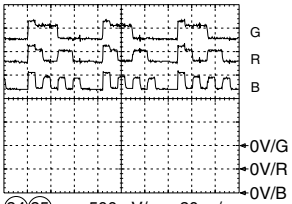
32 2V/cm, 50∞s/cm



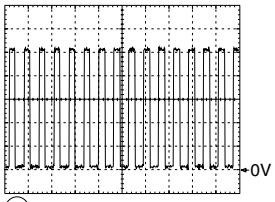
33 1V/cm, 10∞s/cm



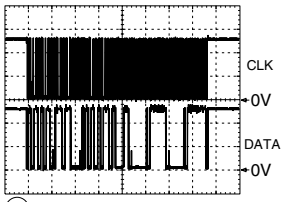
34 35 500mV/cm, 5∞s/cm
36 mit / with OSD



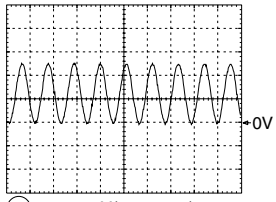
34 35 36 500mV/cm, 20∞s/cm
ohne / without OSD



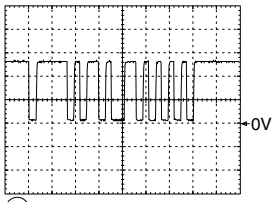
37 1V/cm, 100∞s/cm



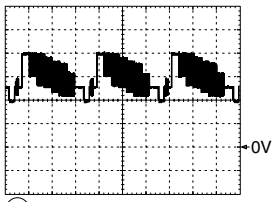
38 2V/cm, 100∞s/cm



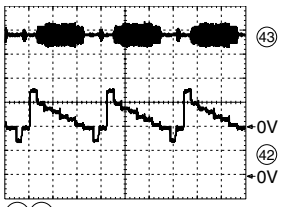
39 2V/cm, 50ns/cm



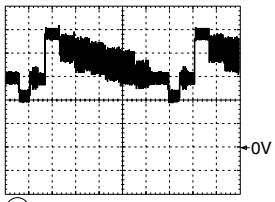
40 2V/cm, 2ms/cm



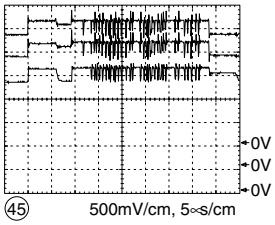
41 1V/cm, 20∞s/cm



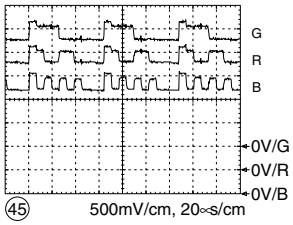
43 42 1V/cm, 20∞s/cm
S-VHS



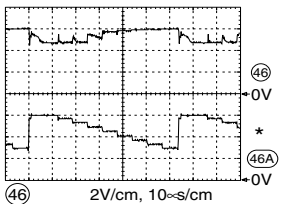
44 1V/cm, 10∞s/cm



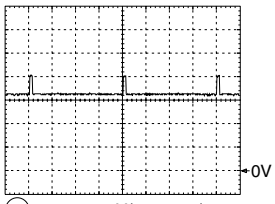
45 500mV/cm, 5∞s/cm
mit / with OSD



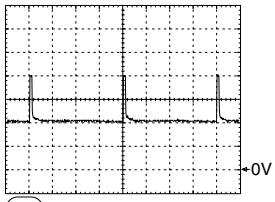
45 500mV/cm, 20∞s/cm
ohne / without OSD



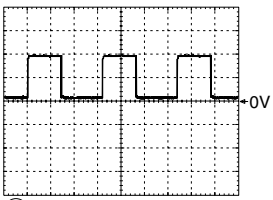
46 2V/cm, 10∞s/cm
46A 50V/cm, 10∞s/cm
* Trigger Pin 11



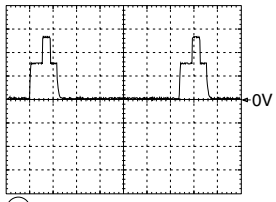
47 1V/cm, 5ms/cm
30% Weißbild / White raster



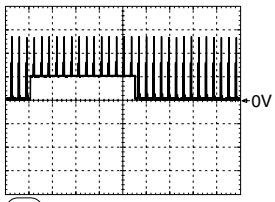
47A 1V/cm, 5ms/cm
100% Weißbild / White raster



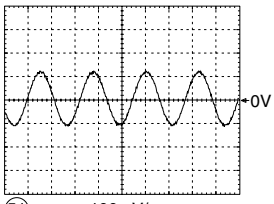
49 2V/cm, 20∞s/cm



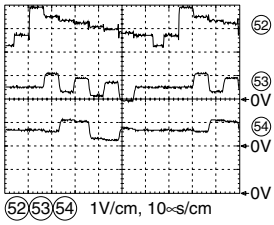
50 2V/cm, 10∞s/cm
Zeile / Line



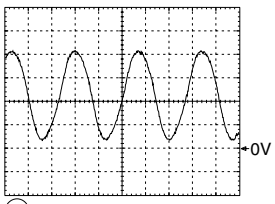
50A 2V/cm, 200∞s/cm
Bild / Picture



51 100mV/cm
4,43 / 3,58MHz



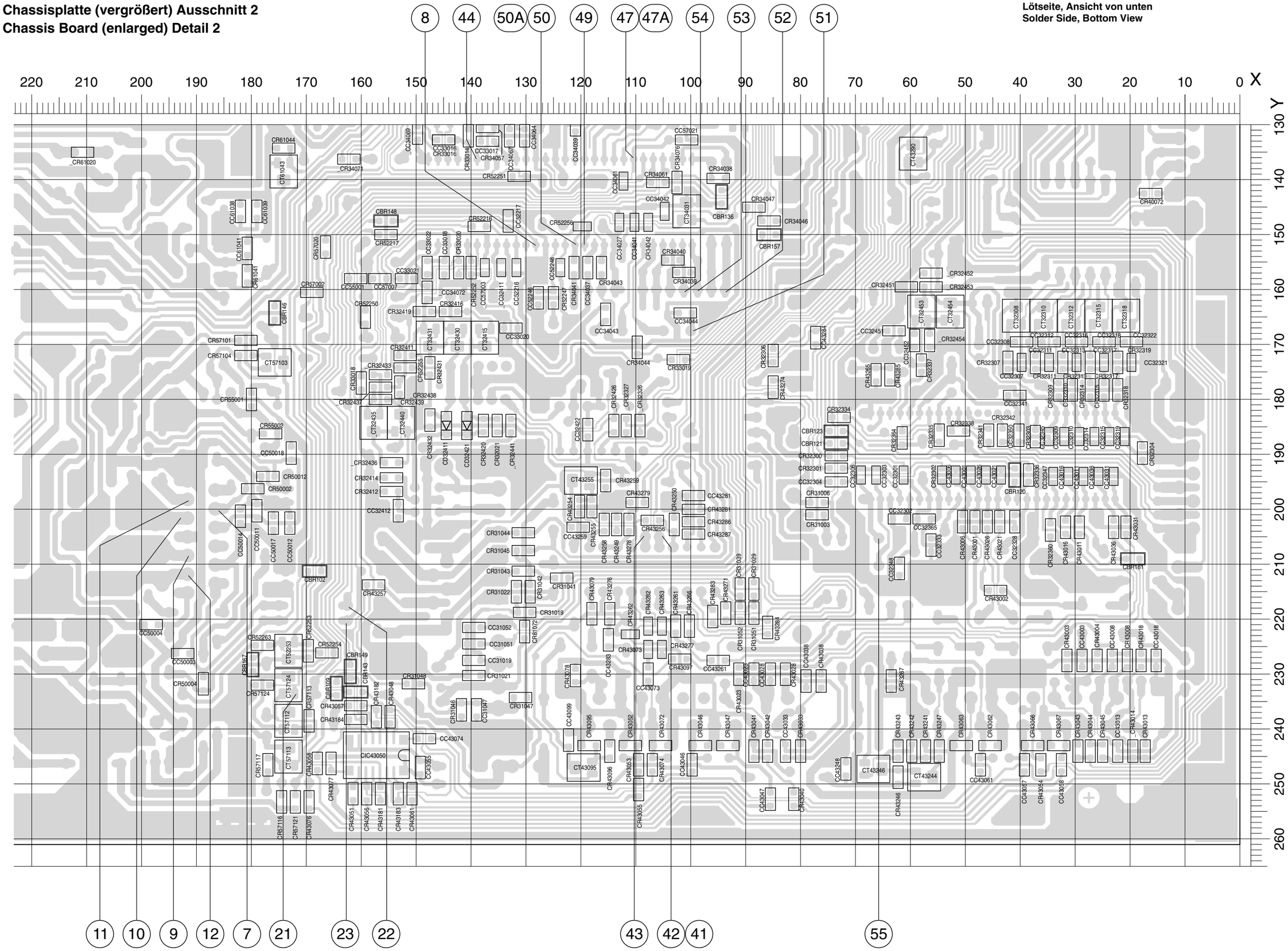
52 53 54 1V/cm, 10∞s/cm



55 1V/cm, 20ns/cm

Chassisplatte (vergrößert) Ausschnitt 2
Chassis Board (enlarged) Detail 2

Lötseite, Ansicht von unten
Solder Side, Bottom View



Platinenabbildungen und Schaltpläne / Layout of the PCBs and Circuit Diagrams

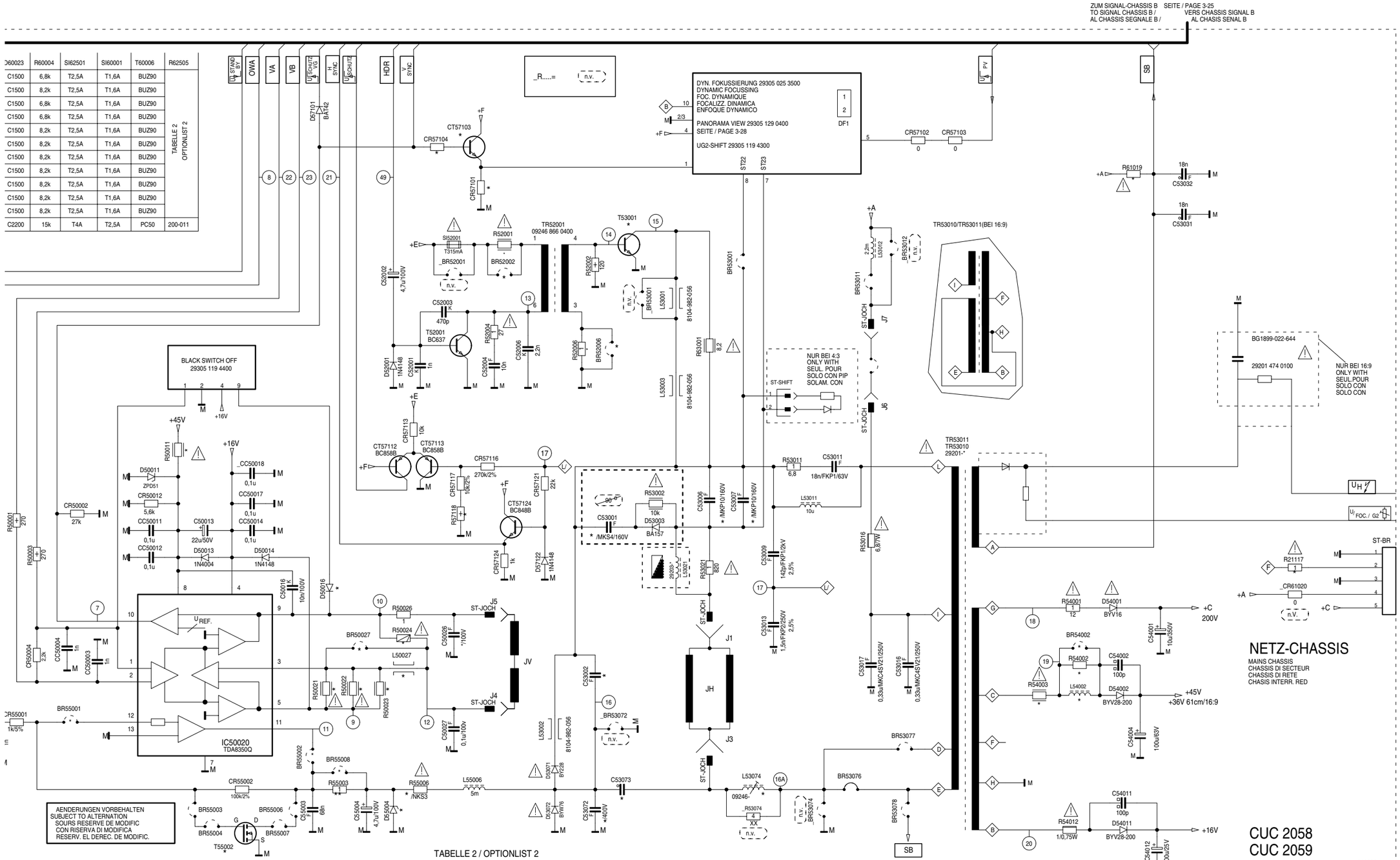
Netz-Chassis / Mains Chassis

TABELLE 1 / OPTIONLIST 1

*	OPTION (A)	OPTION (B)	R61312	R60001	C60002	R60007	C60009	C60010	BR60012	L60012	R60012	R60015	C60022	BR61027	R60036	R60037	C60038	TR61000	TR61001	D61016	R61018	SI61036	D61036	C61037	L62501	R60029	D60023	R60
CUC 2030 (63/70cm PHI/VC)	——	——	——	150k	2,7n	100k	——	220p/		——	——	1	220u	——	1,6k	1,2k	5,6n	——	520.97	BYW178	180k	T2,5A	BYW172D	470u/40V	812.97	82k	C1500	6,8
CUC 2031 (72cm PHI)	X	——	3,3k	270k	2,2n	68k	220p/	——	——		3,3	——	220u	——	680	——	3,3n	337.97	——	BYT56M	220k	T4A	MUR840	1000u/63V	812.97	82k	C1500	8,2
CUC 2032 (63/70cm PHI/VC+SER250)	X	——	12k	270k	2,2n	120k	220p/	——	——		3,3	——	220u	——	470	——	3,3n	343.97	——	BYT56M	220k	T4A	MUR840	1000u/63V	812.97	82k	C1500	6,8
CUC 2033	X	——	3,3k	270k	2,2n	100k	220p/	——	——		3,3	——	330u	——	82	——	3,3n	337.97	——	BYT56M	220k	T5A	MUR840	1000u/63V	825.97	82k	C1500	6,8
CUC 2035/40 (63/70cm PHI/DPL)	X	——	15k	270k	2,2n	68k	220p/	——	——		3,3	——	220u		470	——	3,3n	336.97	——	BYT56M	220k	T5A	MUR840	1000u/63V	812.97	82k	C1500	8,2
CUC 2050 (70cm PHI/DPL2)	X	X	15k	270k	2,7n	68k	220p/	——	——		3,3	——	300u	——	470	——	3,3n	341.97	——	BYT56M	220k	T4A	MUR840	1000u/63V	825.97	82k	C1500	8,2
CUC 2051 (72cm PHI/DPL2)	X	X	3,3k	270k	2,7n	68k	220p/	——	——		3,3	——	300u	——	470	——	3,3n	338.97	——	BYT56M	220k	T4A	MUR840	1000u/63V	825.97	82k	C1500	8,2
CUC 2058 (82cm 16:9)	X	X	10k	270k	2,7n	68k	220p/	——	——		3,3	——	300u	——	470	——	3,3n	340.97	——	BYT56M	220k	T4A	MUR840	1000u/63V	825.97	82k	C1500	8,2
CUC 2059 (70cm 16:9)	X	X	10k	270k	2,7n	68k	220p/	——	——		3,3	——	300u	——	470	——	3,3n	340.97	——	BYT56M	220k	T4A	MUR840	1000u/63V	825.97	82k	C1500	8,2
CUC 2080 (84cm PHI)	X	X	15k	270k	2,7n	68k	220p/	——	——		3,3	——	300u	——	470	——	3,3n	341.97	——	BYT56M	220k	T4A	MUR840	1000u/63V	825.97	82k	C1500	8,2
CUC 2080 (84cm VC)	X	X	18k	270k	2,7n	68k	220p/	——	——		3,3	——	300u	——	470	——	3,3n	342.97	——	BYT56M	220k	T4A	MUR840	1000u/63V	825.97	82k	C1500	8,2
CUC 2040 WEITBEREICH	X	——	15k	270k	2,2n	68k	220p/	——	——		3,3	——	470u 450V		470	——	3,3n	339.97	——	BYT56M	220k	T5A	MUR840	1000u/63V	828.97	39k	C2200	15

*	+A	R21117	R50011	D50016	R50021	R50022	R50023	R50024	C50026
63cm BM	152V	6,2/1W	33	——	1,6	1,8	1,8	100	0,1u
70cm BM	152V	6,2/1W	33	——	1,6	1,6	1,6	100	0,1u
63cm SF	142V	6,8/1W	33	BAV21	1,3	1,3	1,3	100	0,1u
72cm SF	142V	6,8/1W	33	BAV21	1,3	1,3	1,3	100	0,22u
84cm	154V	7,5/1W	33	BAV21	1,8	1,8	1,6	100	0,1u
70cm/16:9 PHI	149V	8,2/4W	33	BAV21	1,5	1,5	——	100	0,1u
82cm/16:9 PHI	149V	8,2/4W	33	BAV21	1,5	1,5	——	100	0,1u
63cm TESLA	152V	6,2/1W	22	——	1,6	1,6	1,6	180	0,1u
70cm VC	155V	2,7/2W	33	——	1,8	1,8	2,2	180	0,1u
84cm VC	160V	3,3/2W	33	——	2,2	2,2	2,2	150	0,1u
70cm/16:9 VC	149V	3,3/2W	33	——	1,5	1,8	——	220	0,1u
82cm/16:9 VC	149V	3,3/2W	33	——	1,5	1,8	——	220	0,1u

CUC 2058 D / 2059 D



C60023	R60004	SI62501	SI60001	T60006	R62505
C1500	6,8k	T2,5A	T1,6A	BUZ90	TABELLE 2 OPTIONLIST 2
C1500	8,2k	T2,5A	T1,6A	BUZ90	
C1500	6,8k	T2,5A	T1,6A	BUZ90	
C1500	6,8k	T2,5A	T1,6A	BUZ90	
C1500	8,2k	T2,5A	T1,6A	BUZ90	
C1500	8,2k	T2,5A	T1,6A	BUZ90	
C1500	8,2k	T2,5A	T1,6A	BUZ90	
C1500	8,2k	T2,5A	T1,6A	BUZ90	
C1500	8,2k	T2,5A	T1,6A	BUZ90	
C1500	8,2k	T2,5A	T1,6A	BUZ90	
C1500	8,2k	T2,5A	T1,6A	BUZ90	
C2200	15k	T4A	T2,5A	PC50	200-011

TABELLE 2 / OPTIONLIST 2

C50026	BR50027	L50027	R52001	BR52006 BR52002	R52006	C53001	C53002	T53001	C53006	C53007	TR53010	L53021	C53072	C53073	L53074	BR54002	L54002	R54002	R54003	BR55002 BR55001	T55002	R55003	BR55008	D55004	R55006	R57118	CR57104 CR57101	CT57103	R61019	R62505
0,1u	⌒	—	2,2	—	0,22	0,68u/	9n/FKP1	BU508AF	0,21u	0,26u	-029.52	110.95	24n	u36/MKP10	846.51	—	18u	470	2,2	⌒	—	5,6	—	ZY33	5,6/NKS3	3,3k/2%	—	—	680k	200-010
0,1u	⌒	—	2,2	—	0,22	0,68u/	9n/FKP1	BU508AF	0,21u	0,33u	-029.52	110.95	24n	u36/MKP10	846.51	—	18u	470	2,2	⌒	—	5,6	—	ZY33	5,6/NKS3	3,3k/2%	—	—	390k	200-010
0,1u	⌒	—	2,2	—	0,22	0,68u/	14n/FKP1	S2000N	0,21u	0,33u	-029.59	124.95	20n	u68/MKP10	846.21	—	18u	470	2,2	⌒	—	5,6	—	ZY33	5,6/NKS3	3,9k/2%	—	—	330k	200-010
0,22u	—	⌒	—	⌒	—	0,68u/	14n/FKP1	S2000N	0,21u	0,33u	-029.59	124.95	20n	1,2u/MKP10	846.57	—	18u	470	2,2	⌒	—	5,6	—	ZY33	5,6/NKS3	3,9k/2%	—	—	330k	200-010
0,1u	—	⌒	2,2	—	0,22	0,68u/	11,5n/FKP1	S2000N	0,21u	0,33u	-029.60	110.95	20n	u68/MKP10	846.56	—	18u	470	2,2	⌒	—	5,6	—	ZY33	5,6/NKS3	2,7k/2%	—	—	330k	200-010
0,1u	⌒	—	—	⌒	—	1,2u/	13,5n/FKP1	S2000N	0,2u	0,2u	-029.63	110.95	16n	1,2u/MKP4	846.56	⌒	—	—	2,2	—	STP7N20	—	⌒	—	4,7/NKS3	3,3k/2%	—	—	330k	200-010
0,1u	—	⌒	—	⌒	—	1,2u/	13,5n/FKP1	S2000N	0,2u	0,22u	-029.65	110.95	16n	1,2u/MKP4	846.56	⌒	—	—	2,2	—	STP7N20	—	⌒	—	4,7/NKS3	3,3k/2%	10k	BC848B	330k	200-010
0,1u	⌒	—	2,2	—	0,22	0,68u/	9,5n/1,6kV	BU508AF	0,21u	0,26u	-029.52	118.95	24n	u36/MKP10	846.51	—	18u	470	1	⌒	—	5,6	—	ZY33	5,6/NKS3	3,3k/2%	—	—	330k	200-012
0,1u	⌒	—	2,2	—	0,22	0,68u/	9,5n/1,6kV	BU508AF	0,21u	0,33u	-029.52	110.95	24n	u36/MKP10	846.51	—	18u	470	2,2	⌒	—	5,6	—	ZY33	5,6/NKS3	3,3k/2%	—	—	390k	200-012
0,1u	—	⌒	—	⌒	—	0,68u/	11,5n/FKP1	S2000N	0,21u	0,33u	-029.66	110.95	24n	u68/MKP10	846.56	—	18u	470	2,2	⌒	—	5,6	—	ZY33	5,6/NKS3	2,2k/2%	—	—	330k	200-012
0,1u	—	⌒	—	⌒	—	1,2u/	15,5n/FKP1	BU508AF	0,26u	0,26u	-029.63	110.95	16n	1,2u/MKP4	846.56	⌒	—	—	2,2	—	STP7N20	—	⌒	—	4,7/NKS3	3,3k/2%	—	—	330k	200-012
0,1u	—	⌒	—	⌒	—	1,2u/	15,5n/FKP1	S2000N	0,26u	0,26u	-029.63	110.95	16n	1,2u/MKP4	846.56	⌒	—	—	2,2	—	STP7N20	—	⌒	—	4,7/NKS3	3,3k/2%	—	—	330k	200-012

Platinenabbildungen und Schaltpläne / Layout of the PCBs and Circuit Diagrams

Signal-Chassis A / Signal Chassis A

SIGNAL-CHASSIS A
CHASSIS SIGNAL A
CHASSIS SEGNALE A
CHASIS SENAL A

IRDT-BAUSTEIN 29504 207 0100
IRDT MODULE
MODULE IRDT
MODULO IRDT
MODULO IRDT

SEITE / PAGE 3-39 ST-SB

ENTFAELLT BEI SIGNAL-BAUSTEIN
NOT FITTED ON SIGNAL MODULE
N'EXISTE PAS POUR MODULE SIGNAL
MANCA NELLA VERS. MOD. SIGNALE
NO EXISTE EN MOD. SENAL

TUNER
VST: UV 1315 // UV 1343 UHF only
PLL: 29504 301 0100 w.w. TEMIC 5002

IC32420 STV8225

MC14094 CIC32410

IC81050 **
w.w.
Prozessorplatte 29305 119 XXXX/ 219 XXXX

CUC 2040 INDIA

MSP3410

IC80000 RESET MC33164

IC82000 X24C08

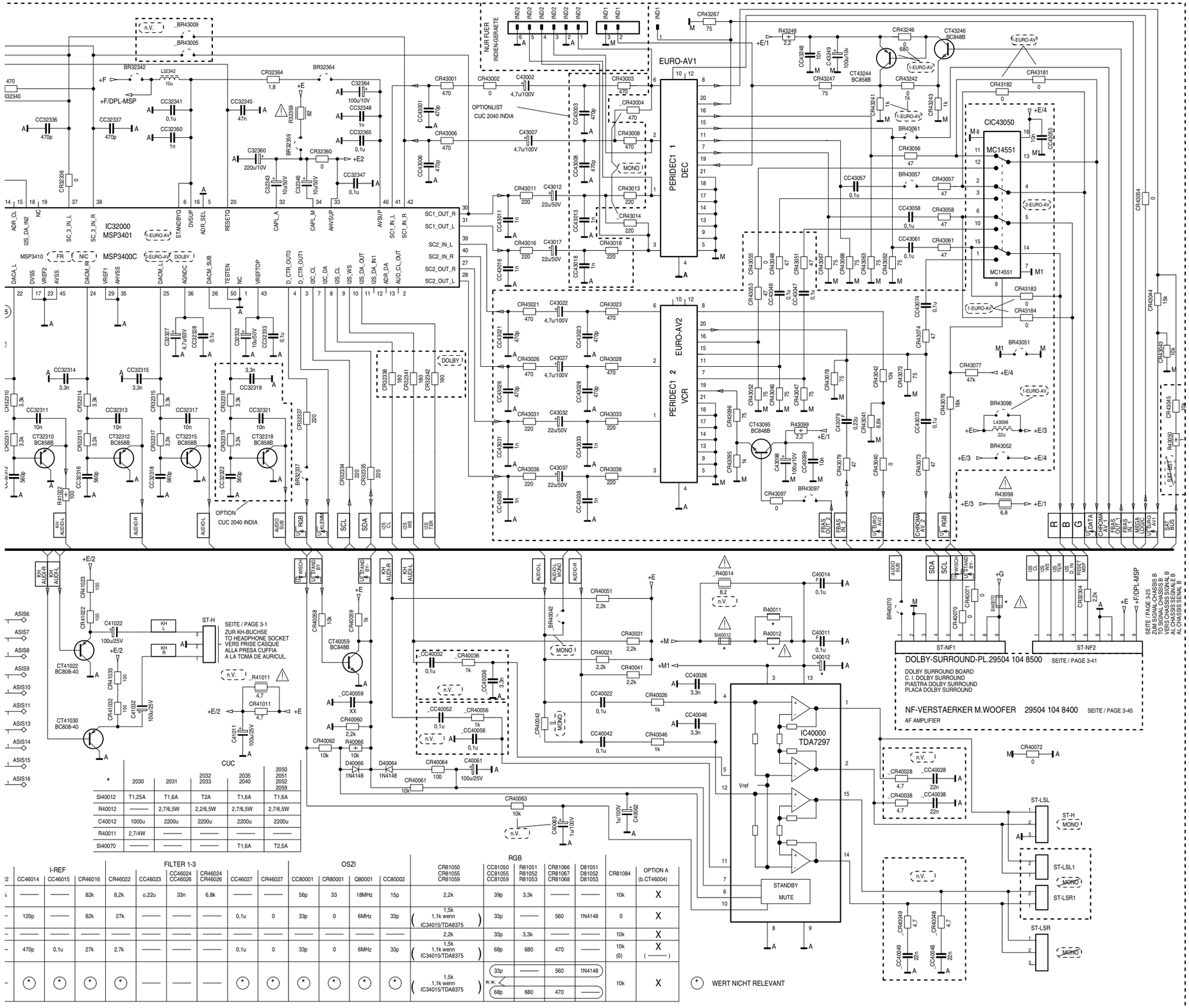
IC82005

MEMORY

**	IC81050 PROZESSORPL.	FBAS CR46001	OSD OSZI CC46021	L46021	CC46022	CC46014
	SDA 5256C/5257C 119 3700/ 4000/ 7500	470k	33p/2%	6,8u/2%	120p/2%	——
	SDA 5257-2/A 32	470k	——	——	——	120p
	119 XXXX	470k	——	——	——	——
	SDA 5257-2/B13 (VST-TUNER)	560k (1M)	——	——	——	470p
	219 XXXX/ 319 XXXX	470k	——	——	——	(*)

**	IC82005
79 Prog.	X24C04
99 Prog.	X24C08

CUC 2058 D / 2059 D



IC32000			
PIN	V	PIN	V
1	0	27	3,6
2	2,2	28	3,6
3	0	29	0
4	0	30	3,6
5	0	31	3,6
6	5,0	32	5,4
7	5,0	33	7,0
8	4,8	34	6,0
9	2,5	35	0
10	2,5	36	3,6
11	2,5	37	3,6
12	1,5	38	3,6
13	1,1	39	3,6
14	1,1	40	3,6
15	1,1	41	3,6
16	5,0	42	3,6
17	0	43	2,5
18	1,5	44	3,6
19	0	45	0
20	5,0	46	4,9
21	1,5	47	1,4
22	1,5	48	1,4
23	0	49	1,8
24	0	50	0
25	0	51	2,3
26	0	52	2,0

IC40000			
PIN	V	PIN	V
1	7,3	9	0
2	7,3	10	0
3	14,6	11	0
4	1,5	12	1,5
5	0	13	14,6
6	5,0	14	7,3
7	5,5	15	7,3
8	0		

*	2030	2031	2032 2033	2035 2040	2050 2051 2052 2059
SI40012	T1,25A	T1,6A	T2A	T1,6A	T1,6A
R40012	——	2,7/6,5W	2,2/6,5W	2,7/6,5W	2,7/6,5W
C40012	1000u	2200u	2200u	2200u	2200u
R40011	2,7/4W	——	——	——	——
SI40070	——	——	——	T1,6A	T2,5A

	I-REF			FILTER 1-3					OSZI				RGB					
	CC46014	CC46015	CR46016	CR46022	CC46023	CC46024 CC46026	CR46024 CR46026	CC46027	CR46027	CC80001	CR80001	Q80001	CC80002	CR81050 CR81055 CR81059	CC81050 CC81055 CC81059	R81051 R81052 R81053	CR81066 CR81067 CR81068	D81051 D81052 D81053	CR81084	OPTION A (b.CT46004)
	——	——	82k	8,2k	o,22u	33n	6,8k	——	——	56p	33	18MHz	15p	2,2k	39p	3,3k	——	——	10k	X
	120p	——	82k	27k	——	——	——	0,1u	0	33p	0	6MHz	33p	1,5k 1,1k wenn IC34015/TDA8375	33p	——	560	1N4148	0	X
	——	——	——	——	——	——	——	——	——	——	——	——	——	2,2k	33p	3,3k	——	——	10k	X
	470p	0,1u	27k	2,7k	——	——	——	0,1u	0	33p	0	6MHz	33p	1,5k 1,1k wenn IC34015/TDA8375	68p	680	470	——	10k (0)	X (——)
	*	*	*	*	——	——	——	*	*	*	*	*	*	1,5k 1,1k wenn IC34015/TDA8375	33p —— 560 1N4148 w.w. 68p 680 470 ——				10k	X

* WERT NICHT RELEVANT

Platinenabbildungen und Schaltpläne / Layout of the PCBs and Circuit Diagrams

Signal-Chassis B / Signal Chassis B

SIGNAL-CHASSIS B
CHASSIS SIGNAL B
CHASSIS SEGNALE B
CHASIS SENAL B

IC43280			
PIN	V	PIN	V
1	2,8	11	2,8
2	4,9	12	3,1
3	3,2	13	3,1
4	4,8	14	1,8
5	2,8	15	1,8
6	3,8	16	3,4
7	0	17	1,8
8	3,8	18	3,1
9	7,7	19	0
10	2,8	20	2,6

IC34015			
PIN	V	PIN	V
1	1,3	29	2,4
2	3,8	30	2,4
3	3,8	31	2,4
4	3,8	32	2,4
5	3,0	33	0
6	3,4	34	2,5
7	5,0	35	2,5
8	5,0	36	5,0
9	6,8	37	8,0
10	0	38	3,2
11	4,0	39	5,0
12	8,0	40	2,0
13	3,8	41	0,7
14	0	42	3,2
15	3,4	43	4,0
16	0	44	0
17	3,8	45	0,5
18	4,8	46	2,5
19	3,3	47	2,5
20	3,0	48	4,6
21	3,0	49	4,6
22	3,5	50	2,3
23	3,6	51	3,8
24	3,6	52	3,8
25	3,6	53	4,0
26	0	54	4,0
27	3,0	55	3,0
28	3,0	56	3,8

PIP-BAUSTEIN 29504 106 5100
PIP MODULE 106 5200
MODULE PIP
MODULO PIP
MODULO PIP

IC43280
A TEA6415
B TEA6425
BUS CONTROLLED VIDEO MATRIX

IC34015
** MULTI/FR/16:9
w.w TDA8375/FR

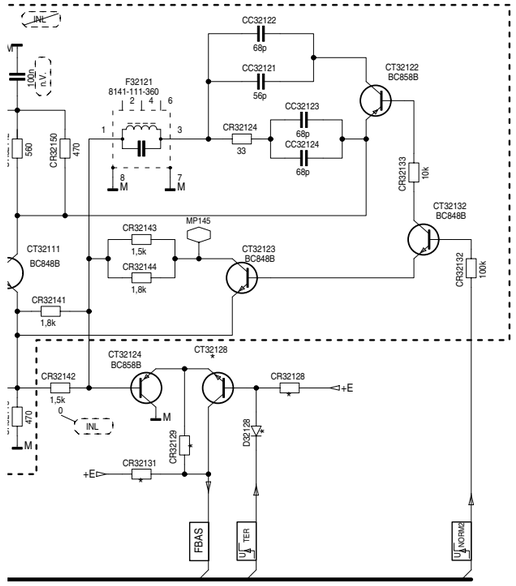
*	R34063 R34066
CUC2030-2040	1-EURO-AV 100
CUC2030-2040	1-EURO-AV+SAT 100
CUC2030-2040	2-EURO-AV 470
CUC2030-2040	2-EURO-AV+SAT 470
INDIA	100
CUC2050-2080	2-EURO-AV/PIP 470
CUC2050-2080	2-EURO-AV/PIP+SAT 470

CUC / ***	STANDART DEFAULT 63cm BM 70cm BM 63cm TESLA	STANDART DEFAULT 63cm BM 70cm BM 63cm TESLA	2030 VIDEOCOLOR 70cm VC	2030 VIDEOCOLOR 70cm VC
IC344015	TDA8843/44	TDA8375	TDA8843/44	TDA8375
CR57006	470k	470k	470k	470k
R57011	3,9k	3,9k	3,9k	3,9k
CR57012	3,9k	3,9k	3,9k	3,9k
CR57022	1k	1,1k	1k	1,1k

_R.....= n.v.

NETZ-CHASSIS
MAINS CHASSIS
CHASSIS SECTEUR
CHASSIS DI RETE
CHASIS RED
SEITE / PAGE 3-17

AENDERUNGEN VORBEHALTEN
SUBJECT TO ALTERNATE
SOURS RESERVE DE MODIFIC
CON RISERVA DI MODIFICA
RESERV. EL DEREC. DE MODIFIC.



OPTIONSLIST CUC2040 INDIA		
	STANDART DEFAULT	CUC2040 INDIA
CR43003/08	470	0
CR43013/18	220	0
CC43003/08	470p	——
CC43013/18	1n	——
CR81047/56	4,7k	2,7k
CR81035/31	——	1k
SUBWOOFER	——	X
CR81015	180/330	0
CR81004	——	820
CR81001	270/1k	330
CR32342	——	180

R34063 R34066	CC34064 CC34067	CR34067 CR34064	CR32131	CR32129	CT32128	D32128	CR32128	VIDEO MATRIX	CC34067	CR34067	CC32304	CR32306	CR81064
100	0	—	—	—	BC848B	1N4148	4,7k	—	0	—	—	—	—
100	0	—	—	—	BC848B	1N4148	4,7k	—	0	—	1n	0	0
470	0,1u	470	4,7k	0	—	—	—	A	0,1u	470	—	—	—
470	0,1u	470	—	—	BC848B	1N4148	4,7k	A	0,1u	470	1n	0	0
100	0	—	—	—	BC848B	1N4148	4,7k	—	0,1u	470	—	—	—
470	0,1u	470	4,7k	0	—	—	—	B	0,1u	470	—	—	—
470	0,1u	470	—	—	BC848B	1N4148	4,7k	B	0,1u	470	1n	0	0

	2030 VIDEOCOLOR 70cm VC	2031 2051 63cm SF 72cm SF	2031 2051 63cm SF 72cm SF	2058 82cm/16:9 PHI	2058 82cm/16:9 VC	2059 70cm/16:9 PHI	2059 70cm/16:9 VC	2080 84cm PHI	2080 VC 84cm VC
	TDA8375	TDA8843/44	TDA8375	TDA8843/44	TDA8843/44	TDA8843/44	TDA8843/44	TDA8843/44	TDA8843/44
	470k	1M	1M	470k	470k	470k	470k	470k	1M
	3,9k	2,7k	2,7k	2,7k	2,7k	3,3k	3,3k	2,7k	2,7k
	3,9k	2,7k	2,7k	2,7k	2,7k	3,3k	3,3k	2,7k	2,7k
	1,1k	1k	1,1k	1k	1,1k	1k	1,3k	1k	1k

** CUC	2030-2040 INL/NIC	2030-2040 INL/NIC	2030-2040 FR	2050 - 2080 INL/NIC	2050 - 2080 FR	**2030-2040 INL/NIC**	2030-2040 FR
IC34015	TDA8843N1	TDA 8375	TDA 8375	TDA8843N2	TDA8844N2	**TDA8843N2**	TDA8844N2
Ersatz-Featurepl.	——	29305 119 4500	29305 119 4200	29305 119 3500	29305 119 3500	——	——
CR32101	820/560	820/560	560	680/470	470	**680/470**	470
CC33021	——	——	1u	——	——	——	——
CC33022	——	——	1u	——	1u	——	1u
CR33016	——	——	6,8M	——	6,8M	——	6,8M
CR33018	6,8k	6,8k	0	6,8k	0	**6,8k**	0
CR34044/34046/34047	——	——	——	0	0	——	——
BR34038/34039	——	——	——	X	X	——	——
CR34039/34040	0	——	——	——	——	**0**	0
CR34038	0	0	0	——	——	**0**	0
CR34041	——	0	0	0	0	——	——
C34041	220u/10V	——	——	——	——	**220u/10V**	220u/10V
CR34043	——	0	0	——	——	——	——
C33019	4,7u/100V	4,7u/100V	4,7u/100V	2,2u/100V	2,2u/100V	**2,2u/100V**	2,2u/100V
F33025	-391	-391	-391	——	——	——	——
CR33025	——	8,2k	8,2k	——	——	——	——
CC33025	1,5p	3,9p	3,9p	——	——	——	——
R34057/34058/34059	1,5k	1,2k (1,1k wenn IC8150 29305 219 xxxx)	1,2k	1,5k	1,5k	**1,5k**	1,5k
R34031	——	2,2k	2,2k	——	——	——	——
CR34032	390	0	0	390 (3,9k)	390 (3,9k)	**390 (3,9k)**	390 (3,9k)
CR34033	560	3,3k	3,3k	560 (5,6k)	560 (5,6k)	**560 (5,6k)**	560 (5,6k)
CC34032	330p	220p	220p	(33p)	(33p)	**(33p)**	(33p)
CC34037	0,1u	0	0	0,1u	0,1u	**0,1u**	0,1u
CC34039	0,22u	0,1u	0,1u	0,22u	0,22u	**0,22u**	0,22u
BR57021	X	——	——	X	X	X	X
D57021	——	BAT42	BAT42	——	——	——	——
R34056	8,2k	470	470	8,2k	8,2k	**8,2k**	8,2k

IC8150=SDA5156/57
(IC8150=SDA5257-2)

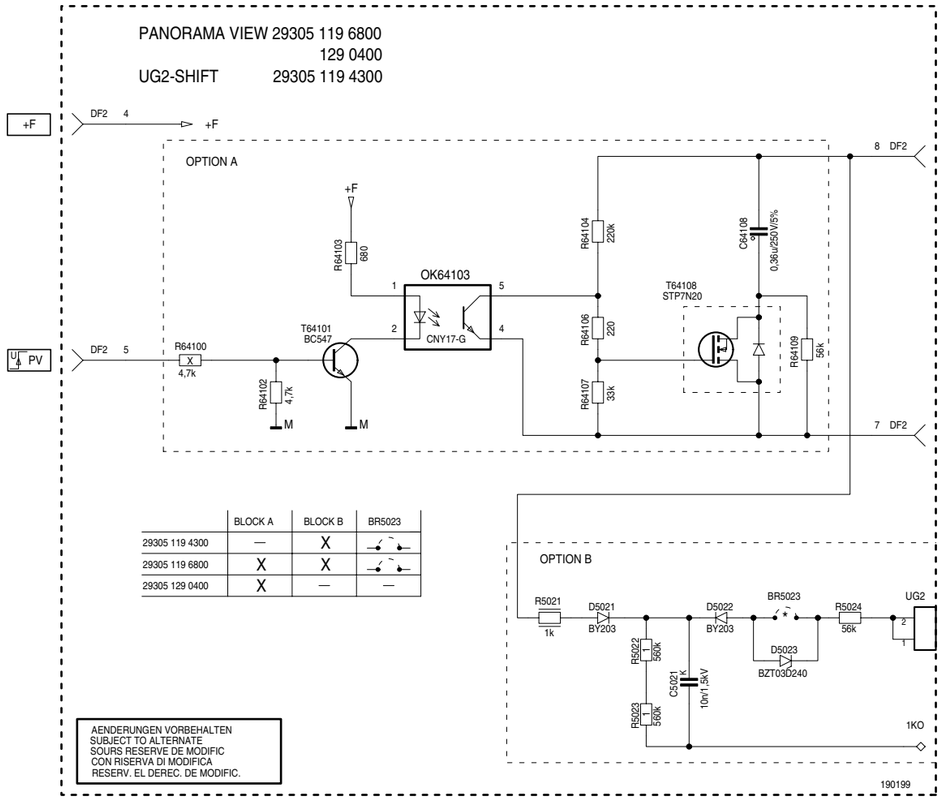
SIGNAL-CHASSIS

CHASSIS SIGNAL
CHASSIS SEGNALE
CHASIS SENAL

CUC 2058
CUC 2059

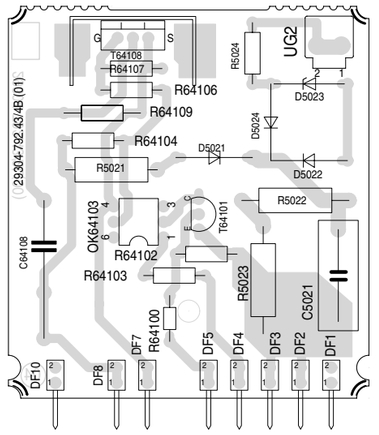
010299
21641 907 0200

Panorama View

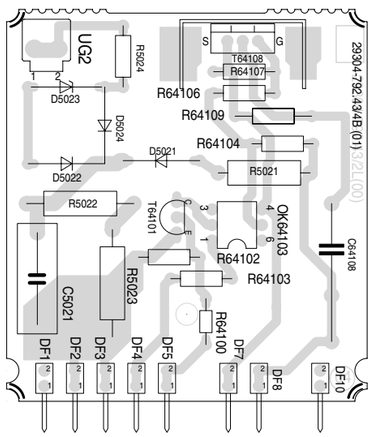


	BLOCK A	BLOCK B	BR5023
29305 119 4300	—	X	
29305 119 6800	X	X	
29305 129 0400	X	—	—

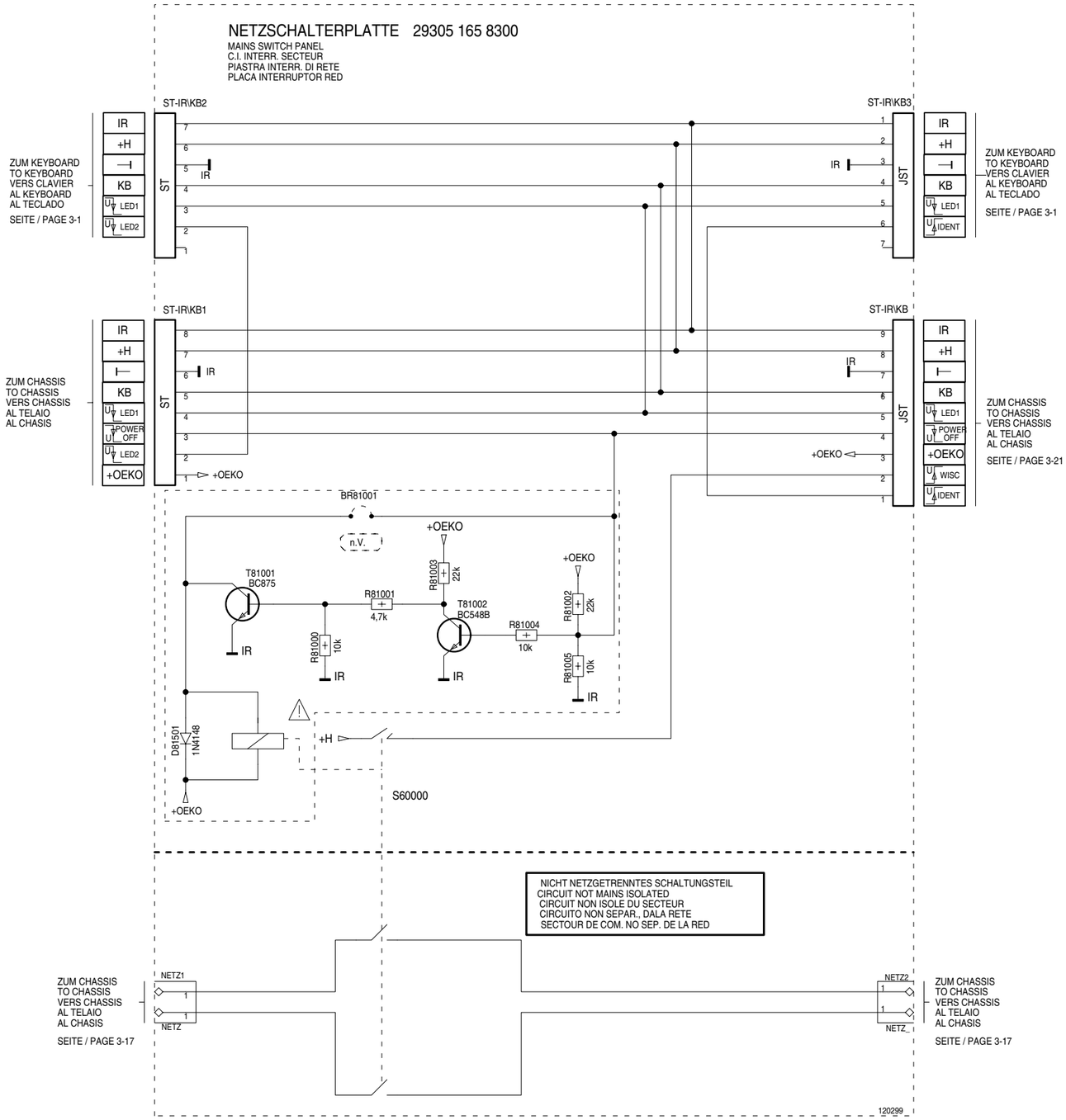
Bestückungsseite, Ansicht von oben
Component Side, Top View



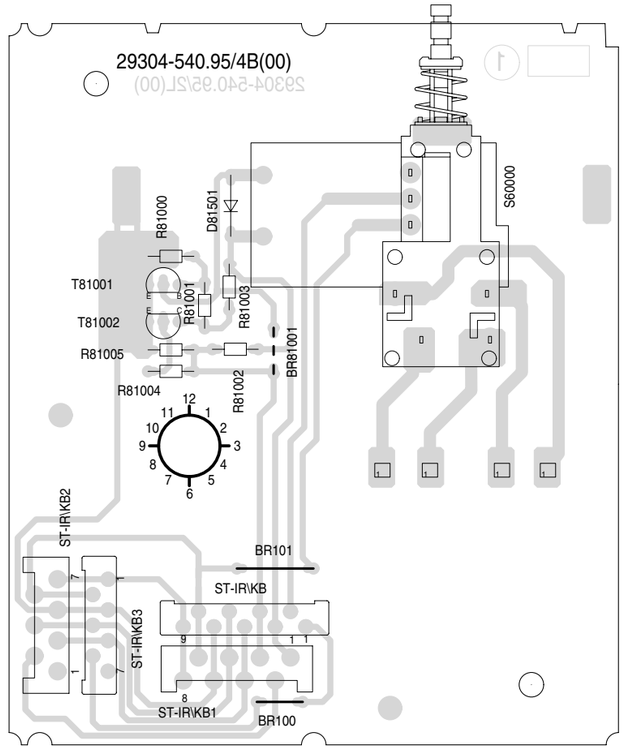
Lötseite, Ansicht von unten
Solder Side, Bottom View



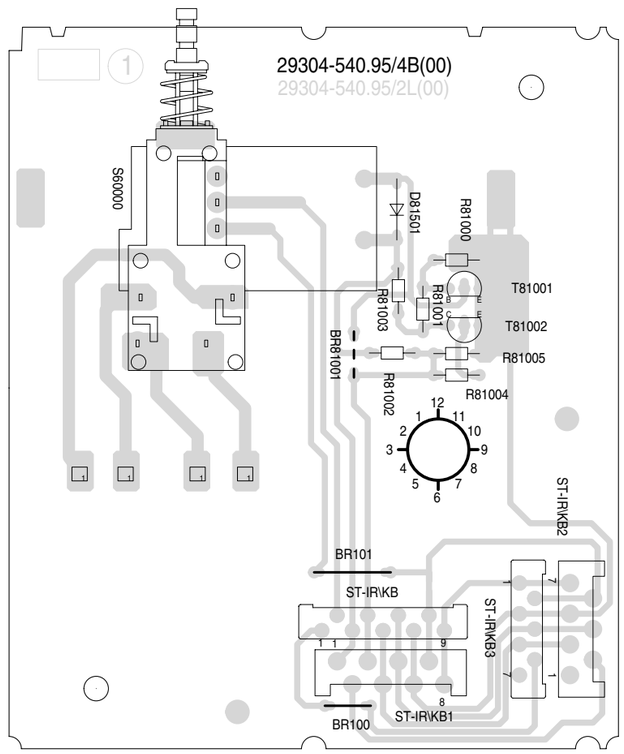
Netzschalterplatte / Mains Switch Board



Bestückungsseite, Ansicht von oben / Component Side, Top View



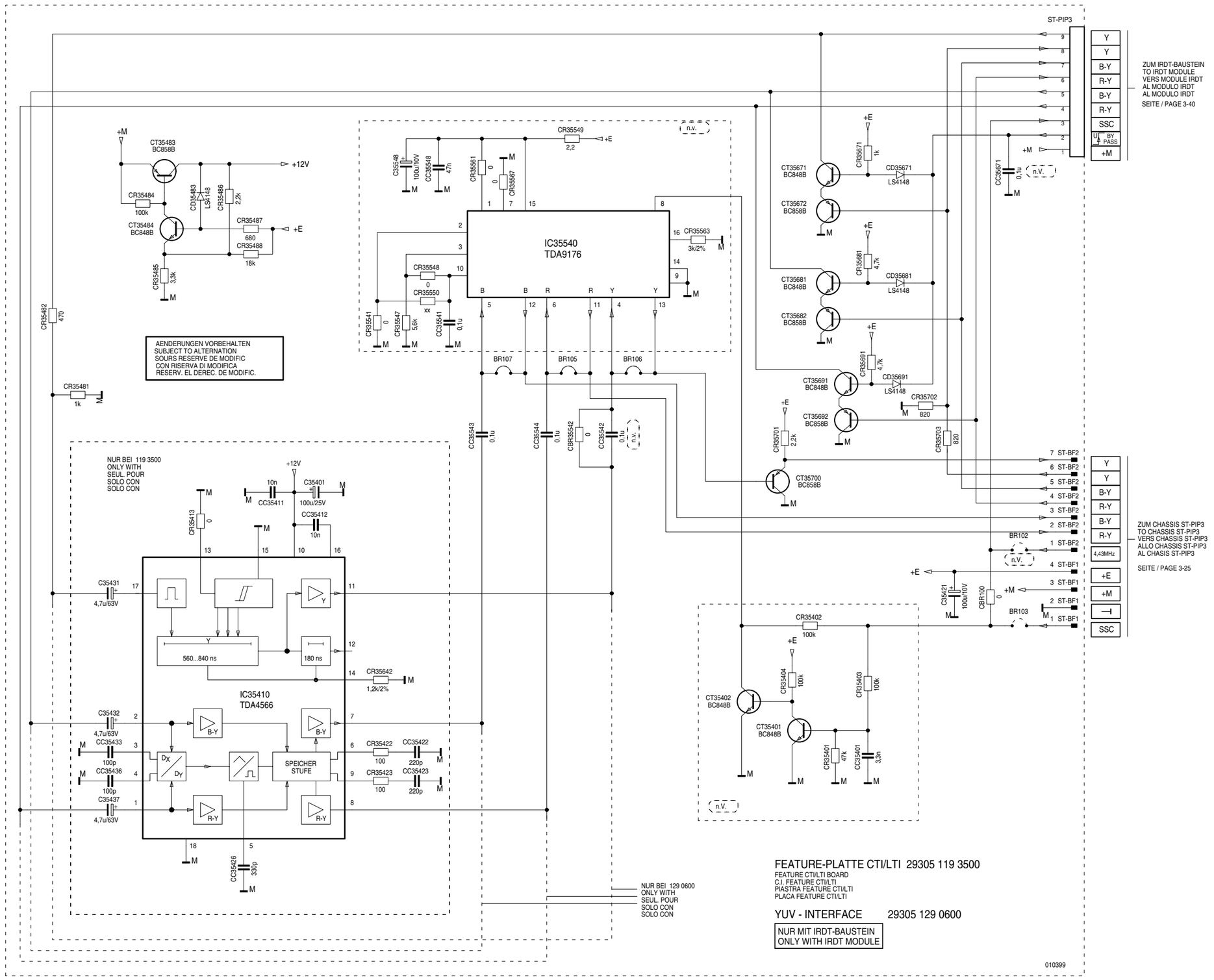
Lötseite, Ansicht von unten / Solder Side, Bottom View



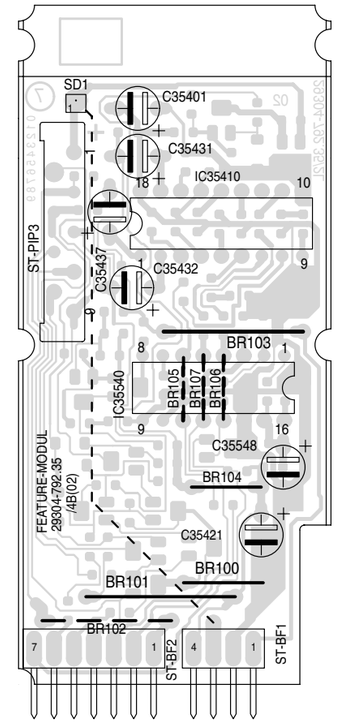
GRUNDIG Service

CUC 2058 D / 2059 D

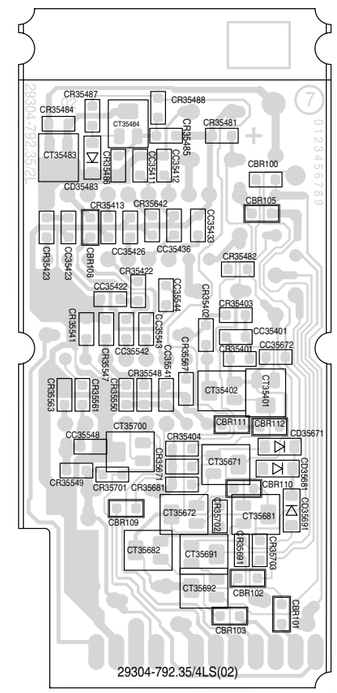
YUV-Interface



Bestückungsseite, Ansicht von oben
Component Side, Top View

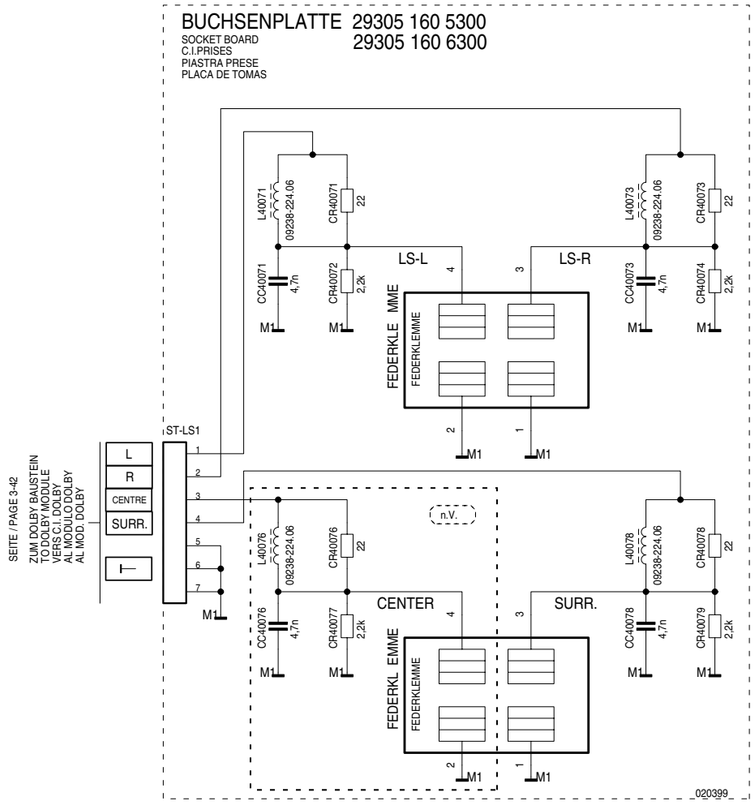


Lötseite, Ansicht von unten
Solder Side, Bottom View

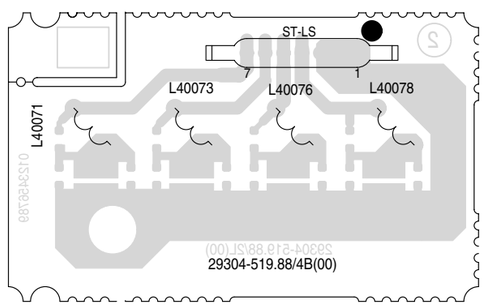


GRUNDIG Service

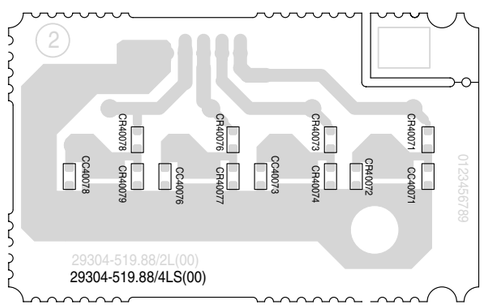
Buchsenplatte / Socket Board



Bestückungsseite, Ansicht von oben
Component Side, Top View

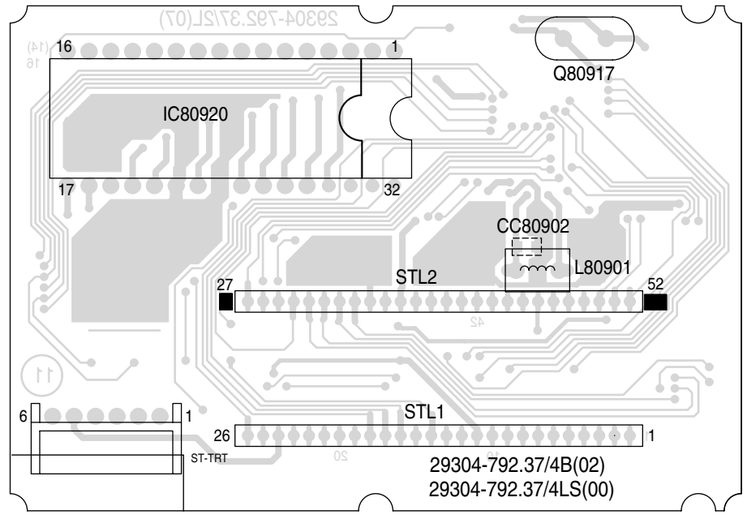


Lötseite, Ansicht von unten
Solder Side, Bottom View

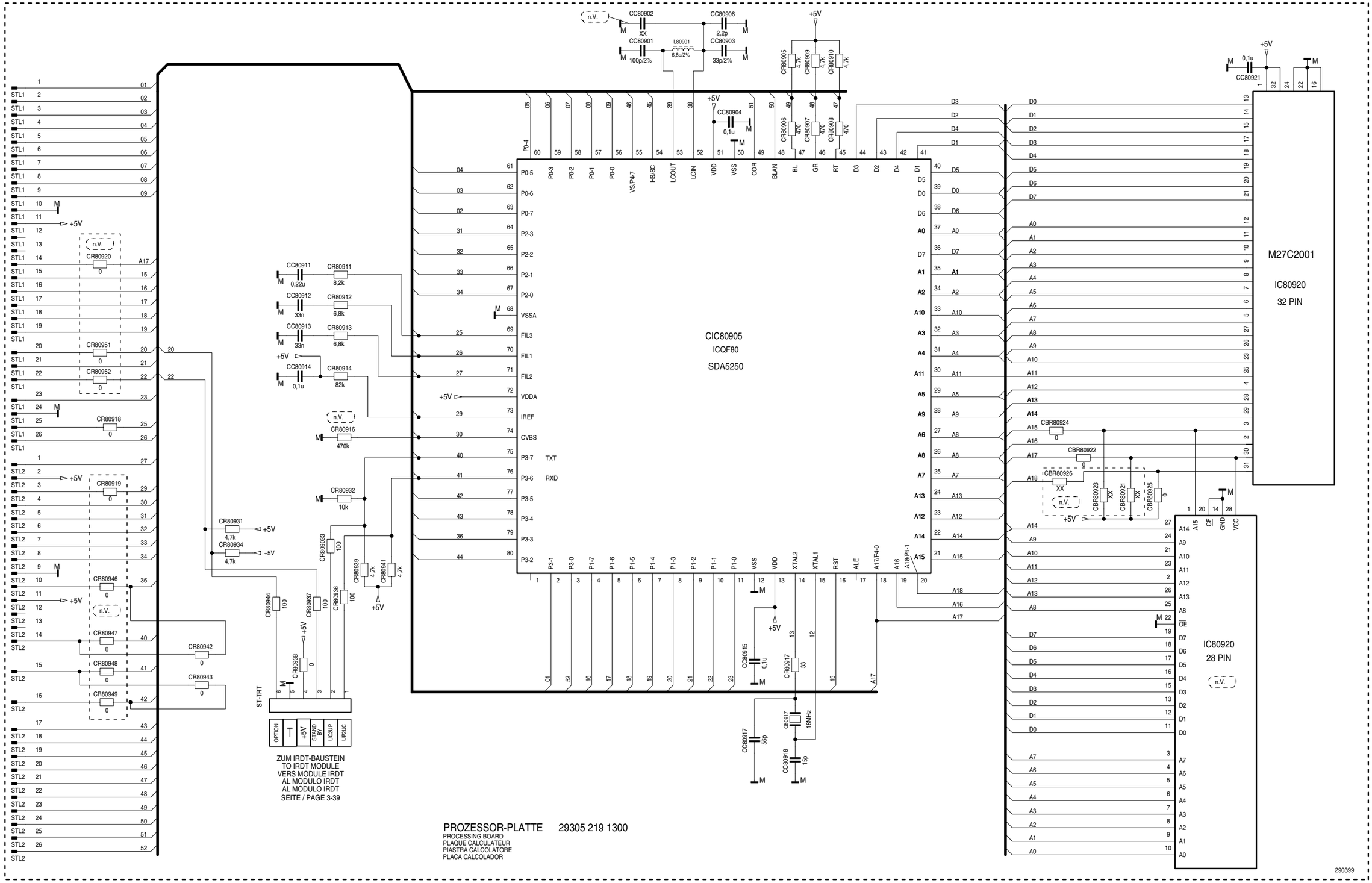


Prozessorplatte / Processor Board

Bestückungsseite, Ansicht von oben / Component Side, Top View

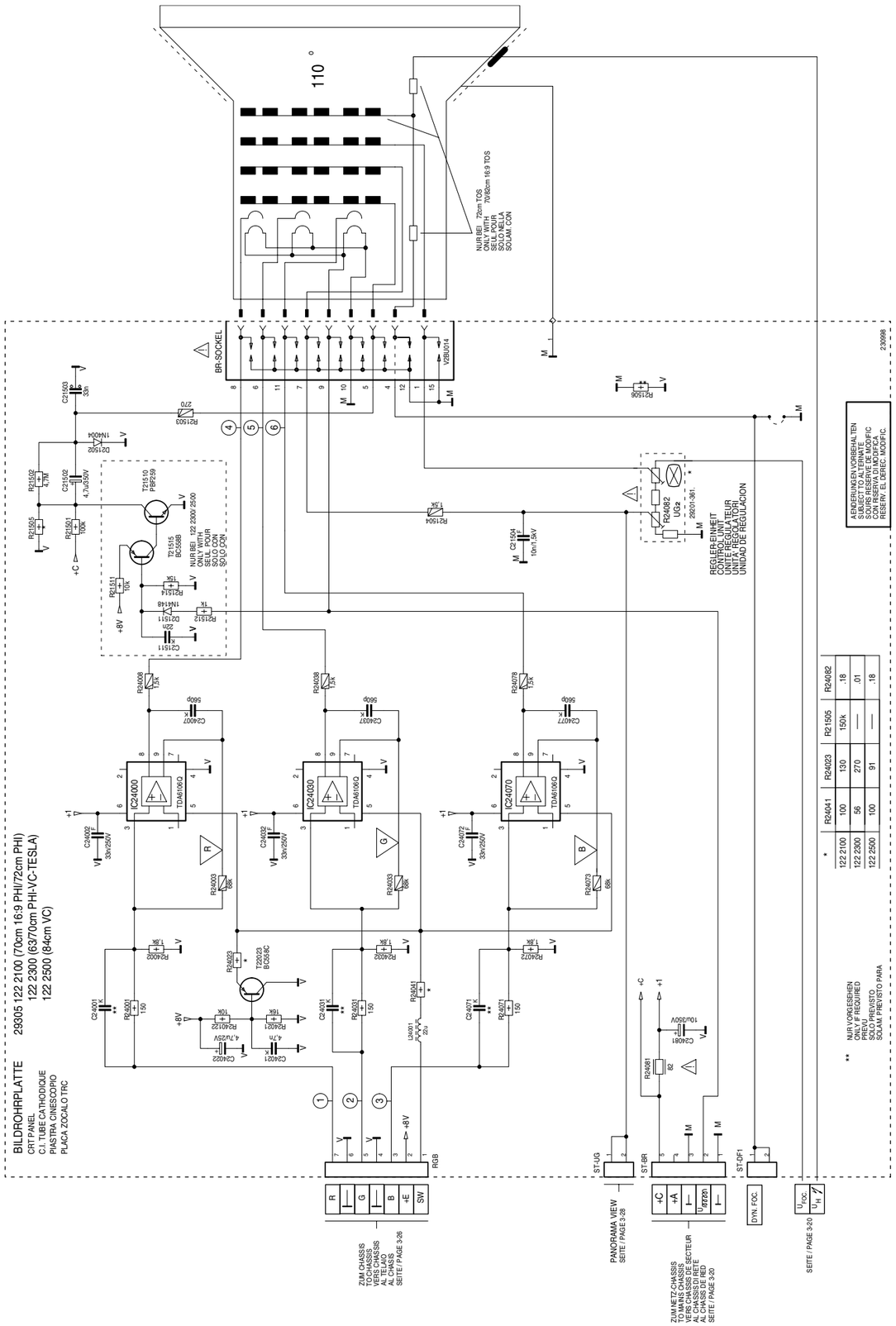


CUC 2058 D / 2059 D

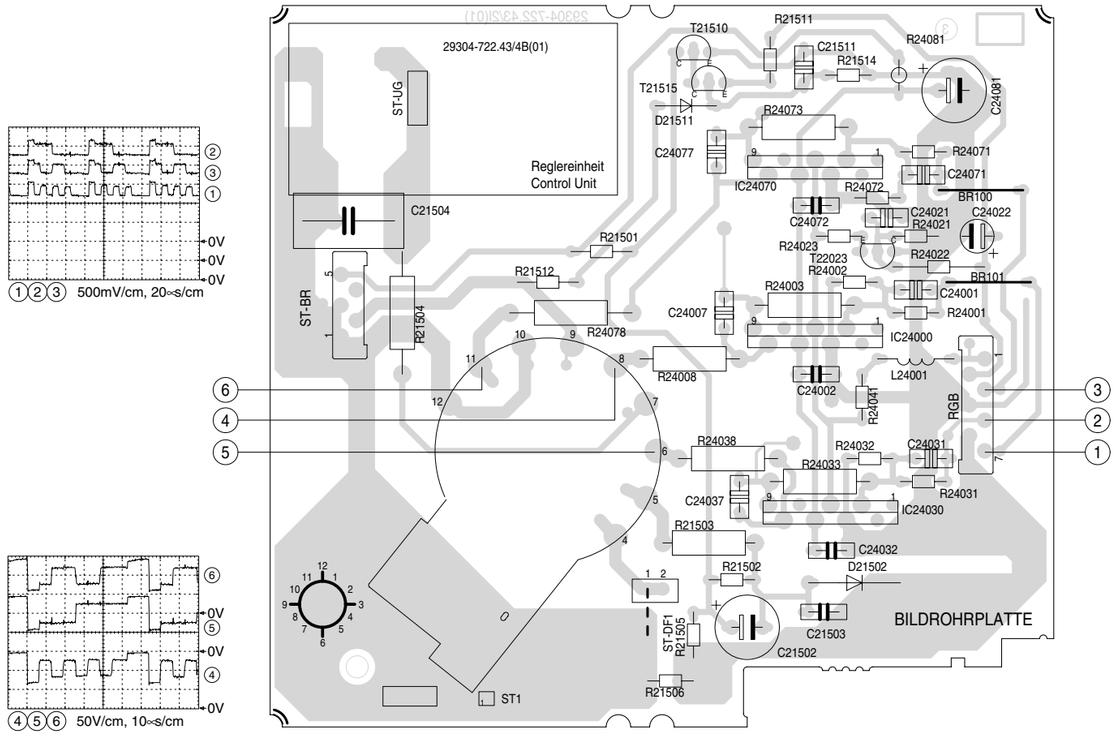


GRUNDIG Service

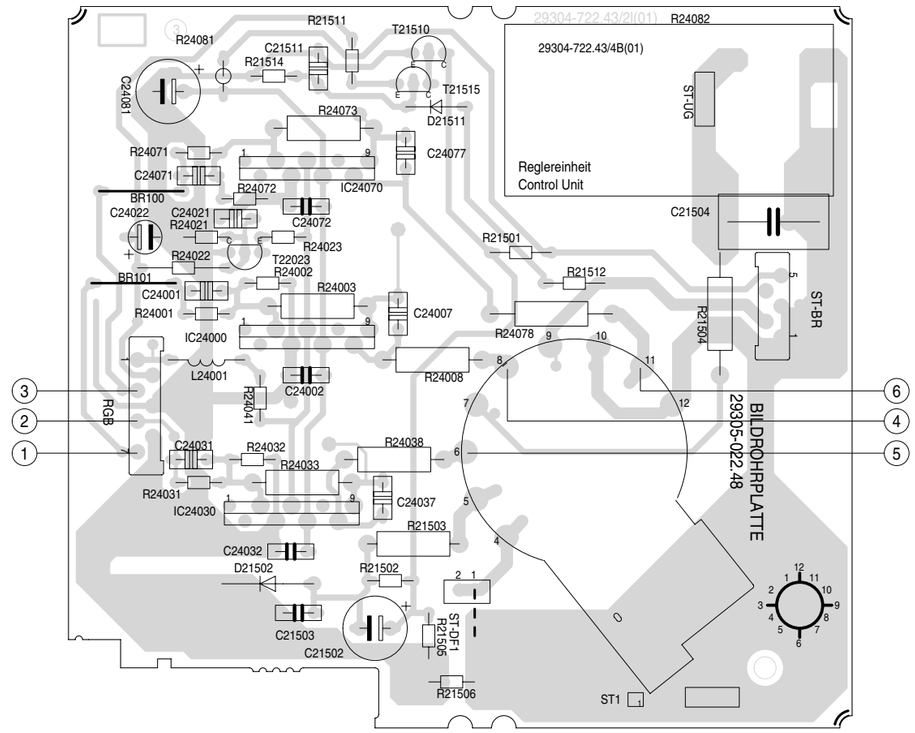
Bildrohrplatte / CRT Panel


110 °
BR-SOCKEL
V2BU014
NUR BEI 72cm TOS 70/80cm 16:9 TOS
ONLY WITH SEUL POUR SOLO HELLA SOLAM CON
AENDERUNGEN VORBEHALTEN SUBJECT TO ALTERNATE CAMBIO RISERVATO MODIFICA RESERV. EL DERECH. MODIFIC.
REGLER-EINHEIT CONTROL UNIT UNITE REGULATEUR UNITA REGOLATORI UNIDAD DE REGULACION
BILDROHRPLATTE
CRT PANEL
C.I. TUBE CATHODIQUE
PIASTRA CINESCOPIO
PLACA ZOCALO TRC
29305 122 2100 (70cm 16:9 PHI/72cm PHI)
122 2300 (63/70cm PHI-VC-TESLA)
122 2500 (84cm VC)
ZUM CHASSIS TO CHASSIS VERS CHASSIS AL CHASSIS SEITE / PAGE 3-26
PANORAMA VIEW SEITE / PAGE 3-28
ZUM MEITZ-CHASSIS TO MAINS CHASSIS VERS CHASSIS DE SECTEUR AL CHASSIS DE RED SEITE / PAGE 3-20
SEITE / PAGE 3-20
NUR VORGESEHEN ONLY IF REQUIRED PREVU SOLO PREVISTO SOLAM PEDIDO PARA
R24008 7.5k
R24038 7.5k
R24078 7.5k
C24007 560p
C24037 560p
C24077 560p
IC24000 TDA6106Q
IC24030 TDA6106Q
IC24070 TDA6106Q
R24003 680
R24033 680
R24073 680
R24041 100 122 2100
R24023 130 122 2300
R24041 56 122 2500
R21505 150k
R24082 .18
.01
.18

Bestückungsseite, Ansicht von oben / Component Side, Top View

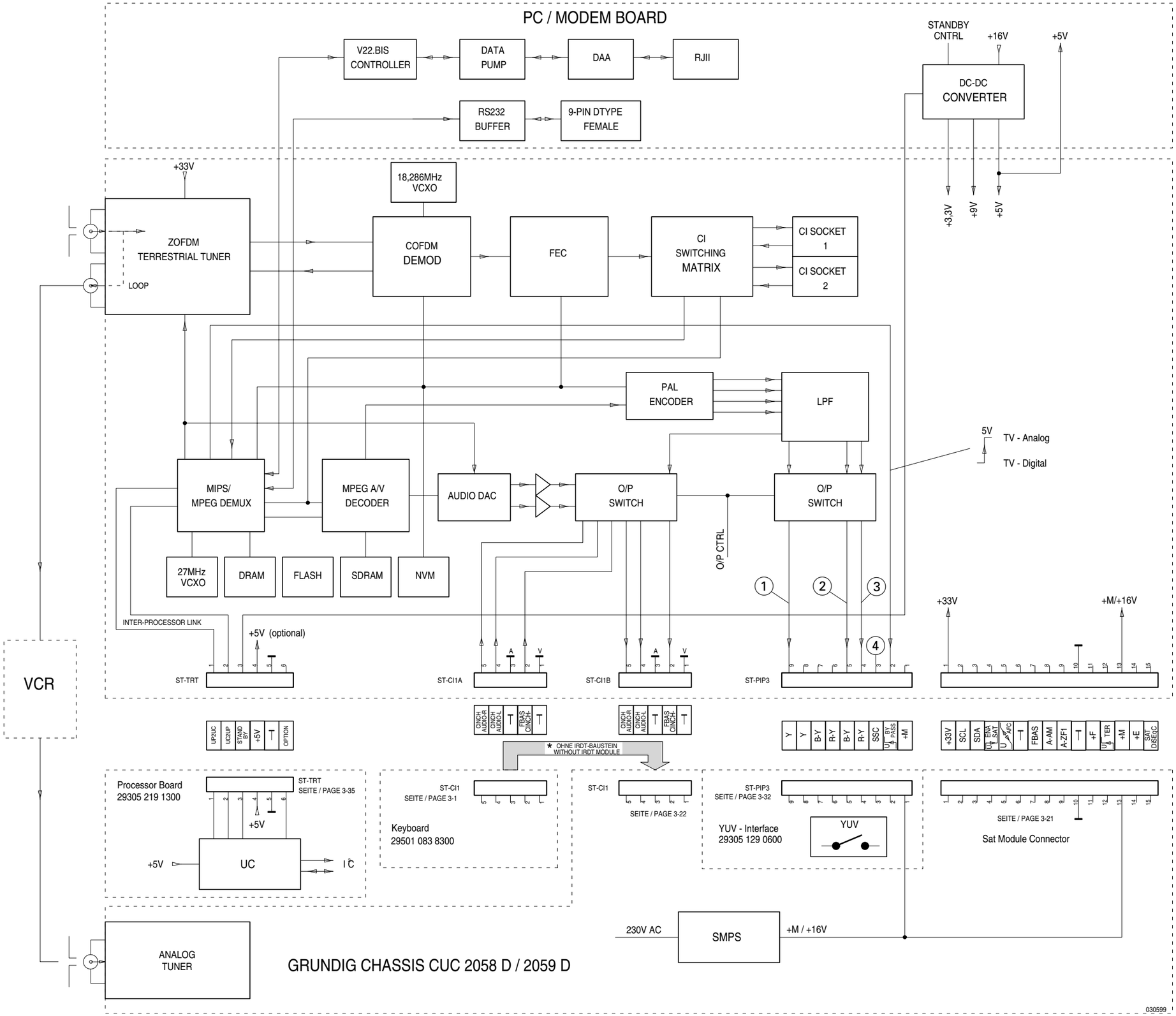


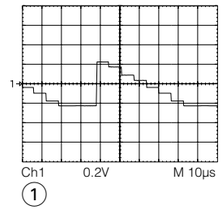
Lötseite, Ansicht von unten / Solder Side, Bottom View

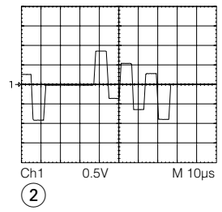


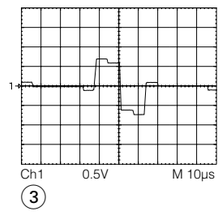
CUC 2058 D / 2059 D

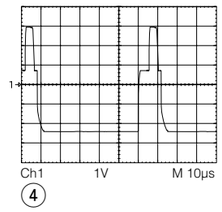
IRDT-Baustein / IRDT Module











*Hinweis:

Die Geräte mit IRDT-Baustein können auch ohne diesen Baustein betrieben werden.
Die Steckverbindung ST-PIP3 zur YUV-Interface muß gelöst werden.
Um die Cinch-Eingänge auch ohne eingebauten IRDT-Baustein nutzen zu können, muß die Steckverbindung ST-CI1 auf dem Keyboard und die Steckverbindung ST-CI1 auf der Chassis-Platte verbunden werden.

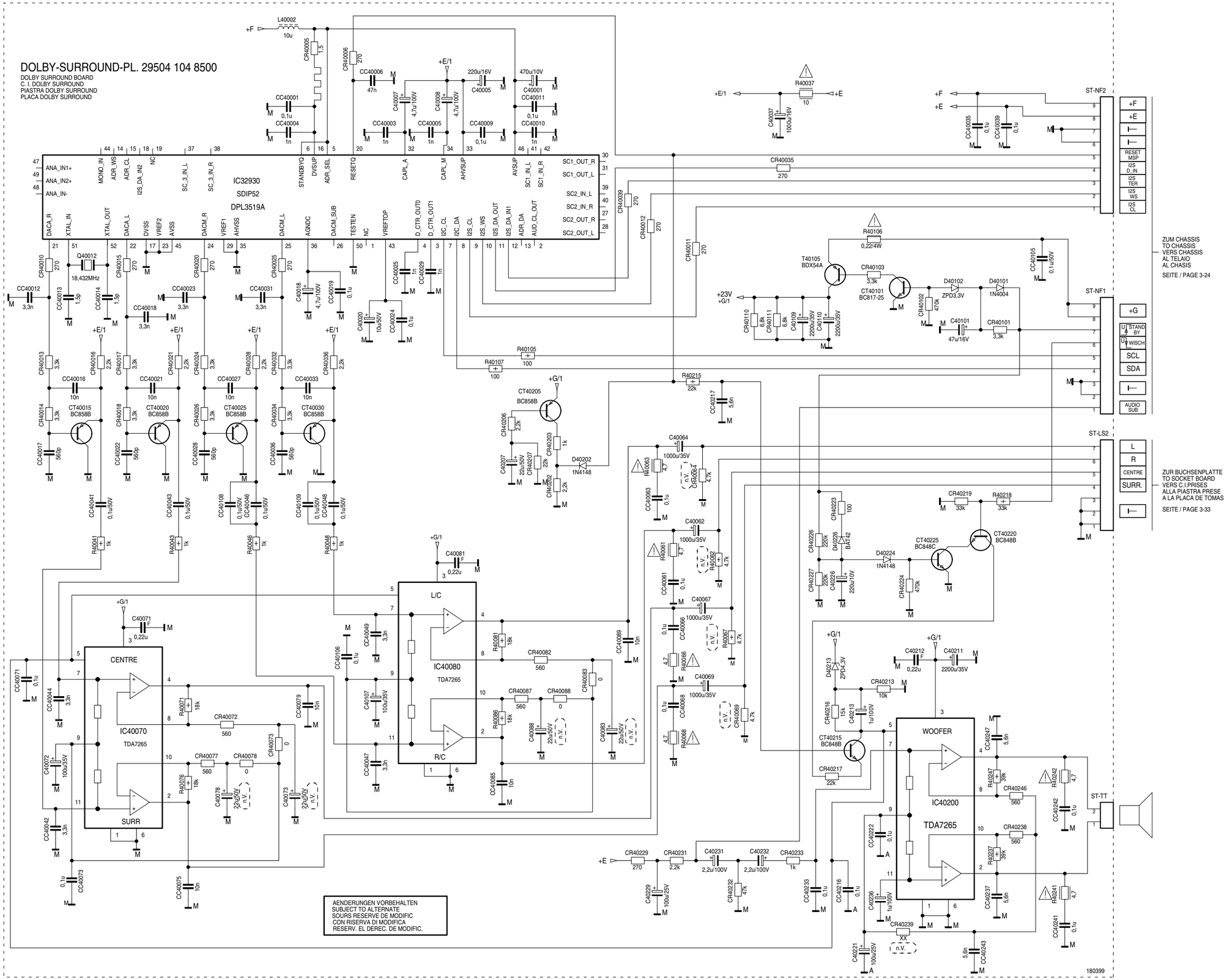
*Note:

The TV receivers with IRDT Module can also be operated without this module.
The connector ST-PIP3 to the YUV interface must be detached.
To make it possible to use the Cinch inputs also without the IRDT Module being built in, connect the connector ST-CI1 on the Keyboard and the connector ST-CI1 on the Chassis Board.

GRUNDIG Service

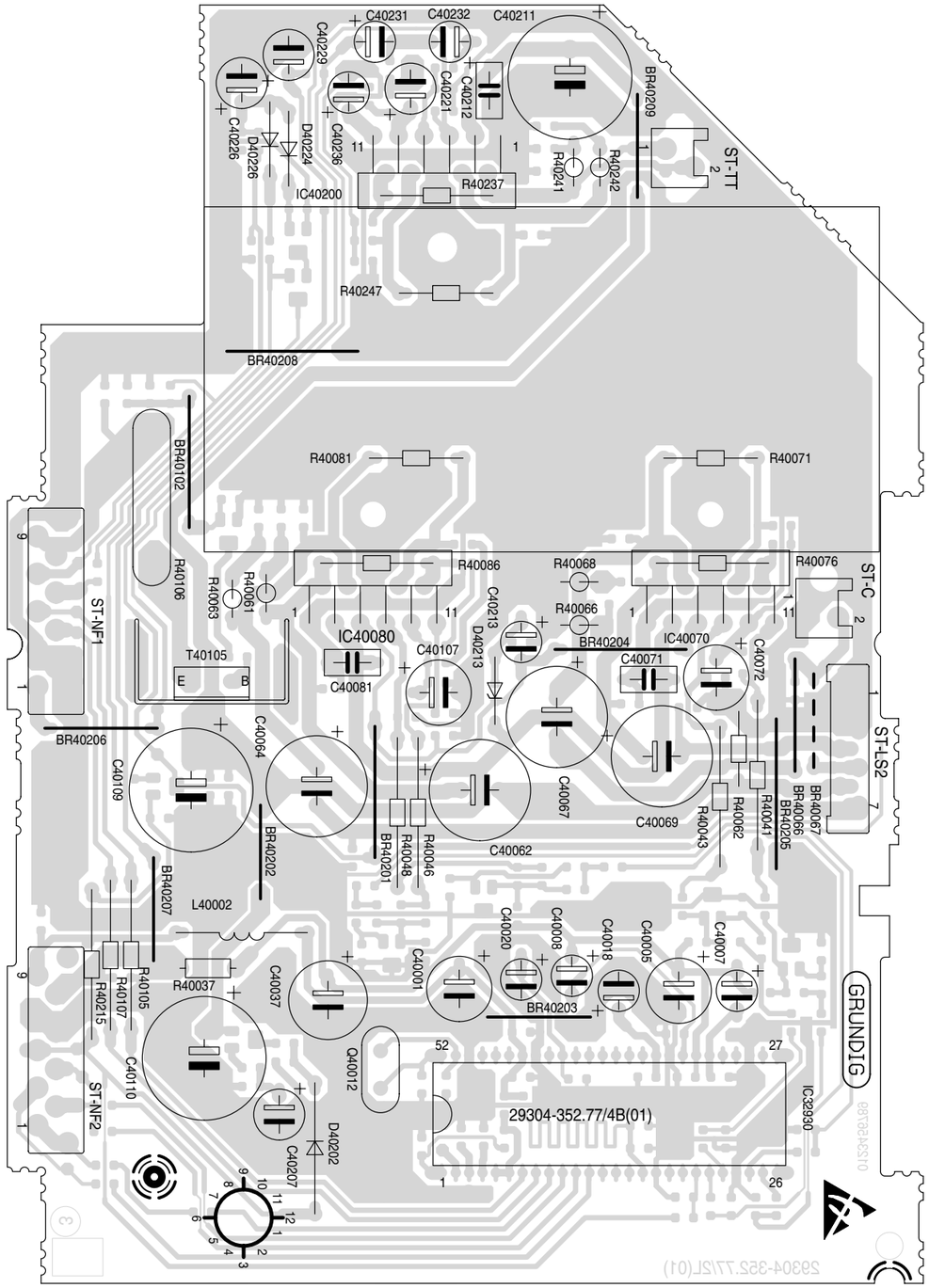
Platinenabbildungen und Schaltpläne / Layout of the PCBs and Circuit Diagrams

Dolby-Surround-Platte / Dolby Surround Board

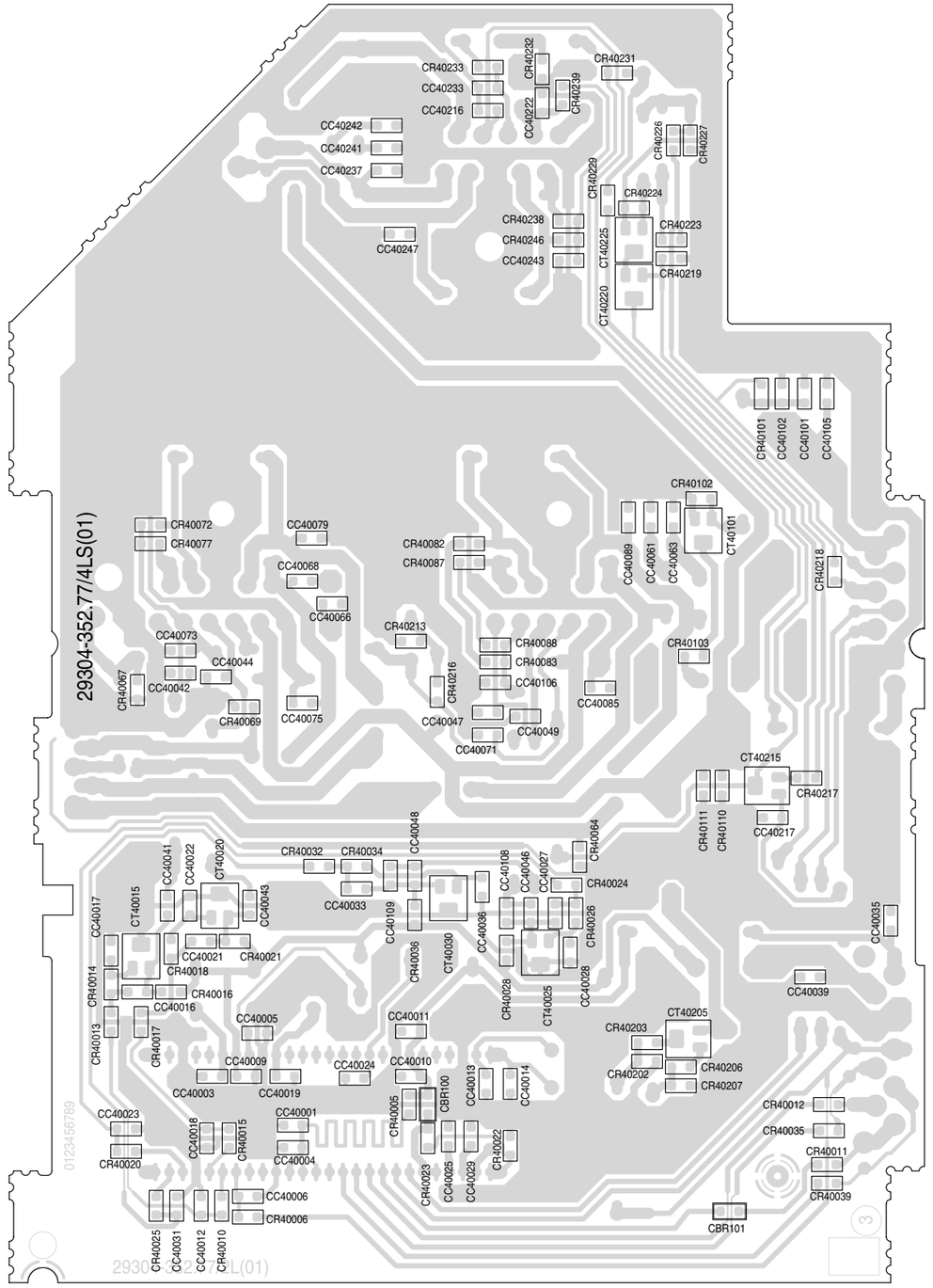


GRUNDIG Service

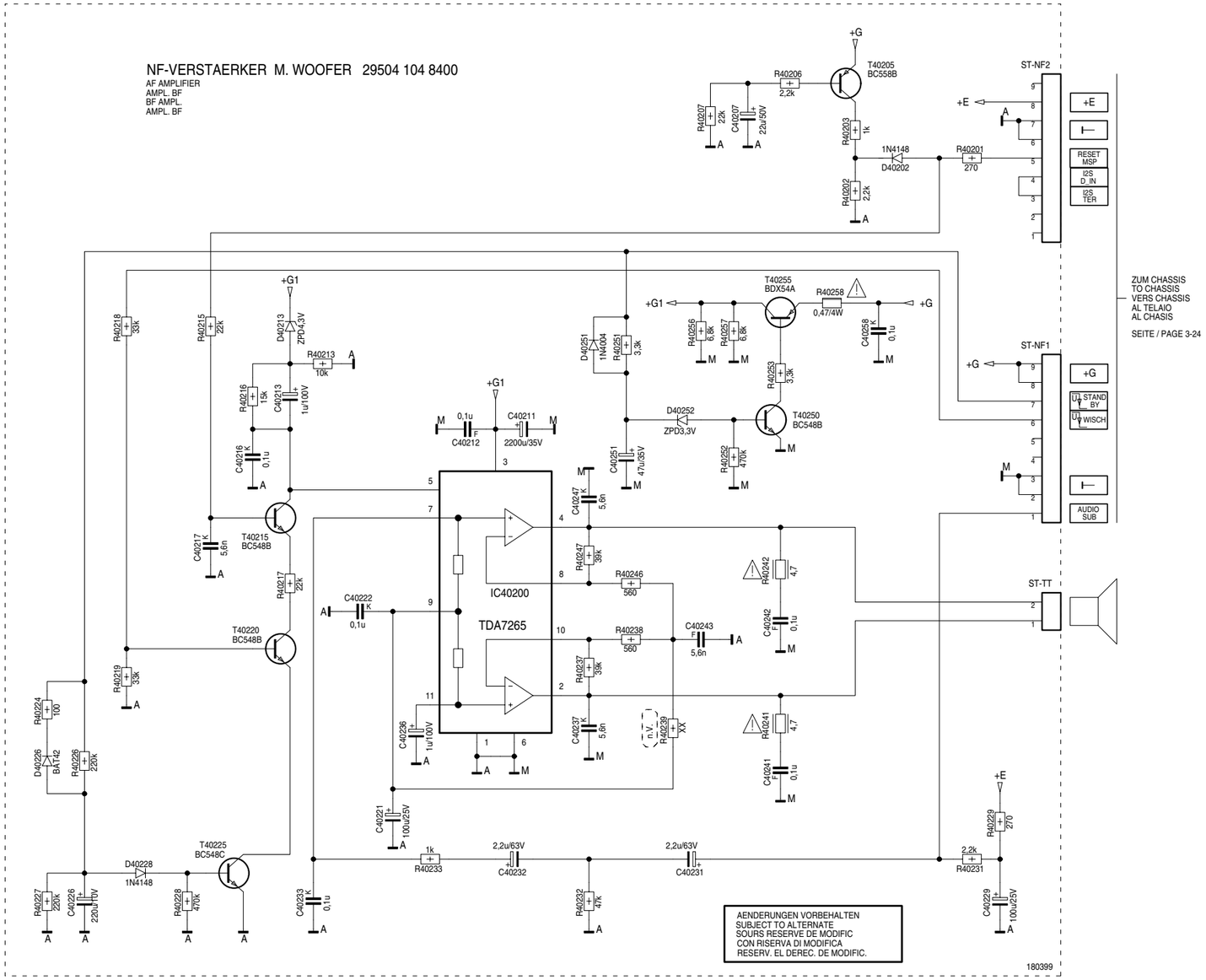
Bestückungsseite, Ansicht von oben / Component Side, Top View



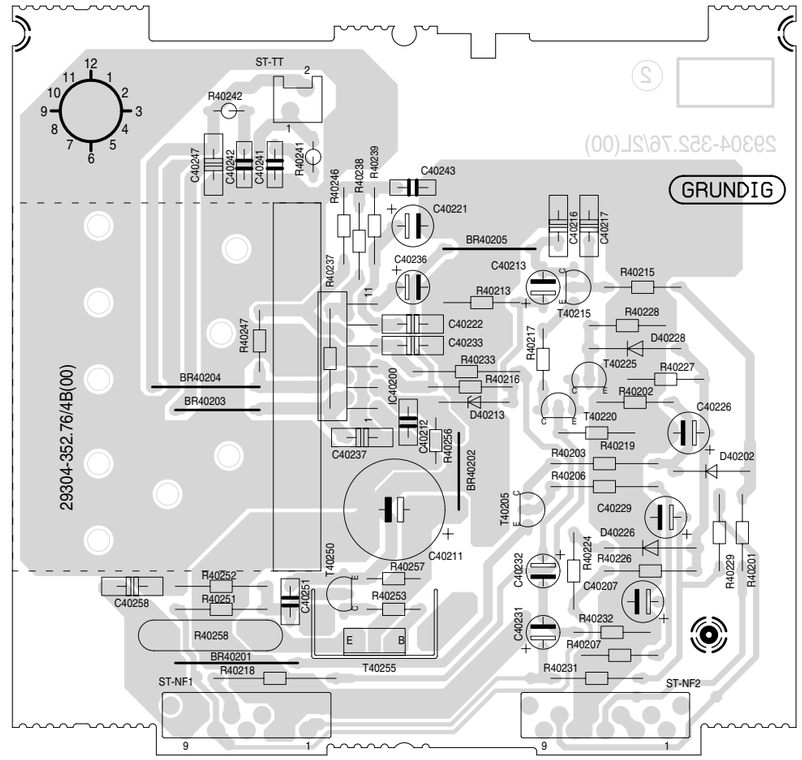
Lötseite, Ansicht von unten / Solder Side, Bottom View



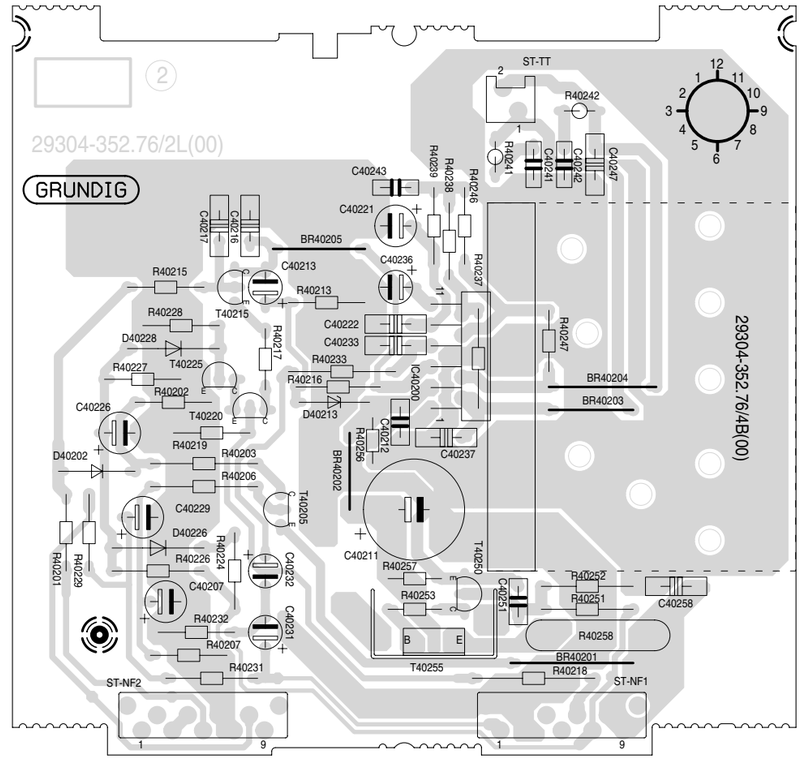
NF-Verstärker / AF Amplifier



Bestückungsseite, Ansicht von oben / Component Side, Top View



Lötseite, Ansicht von unten / Solder Side, Bottom View



GRUNDIG

Ersatzteilliste
Spare Parts List

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TV

ARGANTO 70 MW 70-500 IRDT
ARGANTO 70 MW 70-505 IRDT/DPL

VERSION NR./VERSION NO.: **VNM**

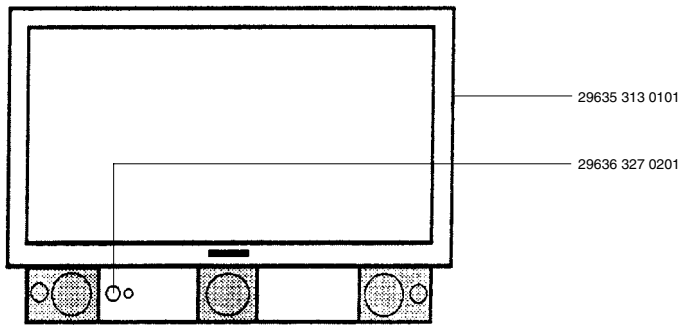
MATERIAL-NR. / PART NO.: 92182 863 5200 BESTELL-NR. / ORDER NO.: G.CI 39-52 GB POLAR
MATERIAL-NR. / PART NO.: 92182 864 5200 BESTELL-NR. / ORDER NO.: G.CI 40-52 GB POLAR

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)		DESCRIPTION (GB)	
		92182 863 5200		ARGANTO 70 MW 70-500 IRDT KEIN E-TEIL		ARGANTO 70 MW 70-500 IRDT NO SPARE PART	
		92182 864 5200		ARGANTO 70 MW 70-505 IRDT/DPL KEIN E-TEIL		ARGANTO 70 MW 70-505 IRDT/DPL NO SPARE PART	
0200.000		29635 313 0101		GEH-VORDERTEIL DRUCK KPL		CABINET FRONT PART PRINT	
0240.000		29636 327 0201		TASTENKNOPF		KEY POWER	
0252.000		29303 390 4200		KOPFHOERERBUCHSE 3,5 O.SCHALTER		HEADPHONE SOCKET 3,5 W/O SWITCH	
0253.000		29303 168 5800		CINCH-BUCHSE 3-FACH RT=SCHALTER/WS/GE		CINCH SOCKET 3 FOLD RD=SWITCH/WH/YE	
0255.000		29636 328 0203		TASTENSATZ		KEY SET	
0256.000		29501 599 0102		ABDECKUNG S-BUCHSEN		COVER S-SOCKETS	
0257.000		29636 439 0602		KLAPPE DRUCK KPL	G.CI 39-52 GB	FLAP PRINT CPL	G.CI 39-52 GB
0257.000		29636 439 0702		KLAPPE DRUCK KPL	G.CI 40-52 GB	FLAP PRINT CPL	G.CI 40-52 GB
0258.000		27033 221 0100		DRUCKSCHNAEPPER		PRESSURE CATCH	
0259.000		29638 023 0101		DAEMPFUNGSBLOCK	G.CI 39-52 GB	DAMPING BLOCK	G.CI 39-52 GB
0259.000		29638 023 1301		DAEMPFUNGSBLOCK	G.CI 40-52 GB	DAMPING BLOCK	G.CI 40-52 GB
0260.000		29303 375 0101		DRAHTFEDER		WIRE SPRING	
0264.000		19116 012 0200	2	LAUTSPRECHER		LOUDSPEAKER	
0267.000		29608 864 0102	4	SOCKELEINLAGE		BASE INSERT	
0269.000		29636 326 0202		IR-FENSTER		IR WINDOW	
0279.000		29638 119 0101	2	SCHALLWAND		BAFFLE	
0280.000		29638 138 0301	2	ABDECKUNG OFB		COVER SURFAC TREATED	
0281.000		29636 504 0401		BEDIENUNGSEINSATZ DRUCK KPL.		CONTROL INSERT PRINT CPL	
0300.000		29636 319 0701		GEH-RUECKTEIL KPL OFB MIT SUBWOOFER		CABINET REAR PART CPL SUR WITH SUBWOOFER	
0320.000		29618 823 0502		TYPENAUFKLEBER	G.CI 39-52 GB	TYPE LABEL SELF-ADH.	G.CI 39-52 GB
0320.000		29618 824 0502		TYPENAUFKLEBER	G.CI 40-52 GB	TYPE LABEL SELF-ADH.	G.CI 40-52 GB
0510.000		29636 324 0101		BOX-RUECKTEIL	G.CI 40-52 GB	BOX REAR PART	G.CI 40-52 GB
0520.000		29632 209 0202		GITTER KPL.	G.CI 40-52 GB	GRID CPL	G.CI 40-52 GB
0530.000		19124 024 6100		LAUTSPRECHER	G.CI 40-52 GB	LOUDSPEAKER	G.CI 40-52 GB
0700.000	⚠	09246 151 8500		ENTMAGNETISIERUNGSSPULE M.HALTER		DEGAUSSING COIL W.HOLDER	
1100.000		83000 660 2300		BILDR.W66EGV023X015 VIDEOCOLOR		PICT.TUBE W66EGV023X015 VIDEOCOLOR	
1110.000		09647 889 0100		ABGLEICHELEMENT MAGNETSCHEIBE		ALIGNMENT PART MAGNETIC WASHER	
1200.000		29201 474 0100		ANODENKABEL M.HS-KONDENSATOR		ANDODE CABLE WITH HS CONDENSER	
1300.000		29501 083 8300		KEYBOARD KEIN E-TEIL		KEYBOARD NO SPARE PART	
1310.000		29703 357 1100		TASTSCHALTER PROGRAMM +		KEY SWITCH PROGRAMME +	
1320.000		29703 357 1100		TASTSCHALTER PROGRAMM -		KEY SWITCH PROGRAMME -	
1330.000		29703 357 1100		TASTSCHALTER LAUTSTAERKE +		KEY SWITCH VOLUME +	
1340.000		29703 357 1100		TASTSCHALTER LAUTSTAERKE -		KEY SWITCH VOLUME -	
1360.000		29703 291 2205		NETZSCHALTER		POWER SWITCH	
2100.000	⚠	82909 913 8600		NETZKABEL KPL GWN9.32 WF:		POWER CABLE CPL GWN9.32 W	
2200.000		29305 160 6300		BUCHSENPLATTE CLICK FIT	G.CI 40-52 GB	SOCKET BOARD CLICK FIT	G.CI 40-52 GB
2300.000		29305 122 2500	X	BILDROHRPLATTE		PICTURE TUBE BOARD	
2400.000		29642 061 1400		FERNBEDIENUNG TP 815 C		REMONTE CONTROL TP 815 C	
2450.000	⚠	29607 307 0102	2	SCHLAUFE		LOOP	
2470.000		81049 001 7000		FERRIT SFC-8 KITAGAWA		SPLIT TOROIDAL CORES SFC-8 KITAGAWA	
2480.000		81406 010 2000		SPERRFILTER SKF20		SUPPRESSION FILTER SKF20	
		21828 941 0100		BEDIENUNGSANLEITUNG GB	G.CI39-52GB	OPERATING INSTRUCT. GB	G.CI 39-52 GB
		21828 941 0200		BEDIENUNGSANLEITUNG GB	G.CI40-52GB	OPERATING INSTRUCT. GB	G.CI 40-52 GB

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)		DESCRIPTION (GB)	
		72010 025 9000		SERVICE MANUAL D/GB		SERVICE MANUAL D/GB	
		29656 004 2600		MONTAGEZUBEHOER FUER BILDROHR KEIN E-TEIL		MOUNTING ACCESSORIES F.CRT NO SPARE PART	
		29704 003 8600	X	CHASSIS-FS-STEREO CUC 2059 D KEIN E-TEIL	G.CI 39-52 GB	CHASSIS TV STEREO CUC 2059 D NO SPARE PART	G.CI 39-52 GB
		29704 003 8700	X	CHASSIS-FS-STEREO CUC 2059 D KEIN E-TEIL	G.CI 40-52 GB	CHASSIS TV STEREO CUC 2059 D NO SPARE PART	G.CI 40-52 GB
				X = SIEHE GESONDERTE E-LISTE		X = SEE SEPARATE PARTS LIST	

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
D 85001	83099 783 7100	LE-DIODE LUB371GK SIE/ LT
D 85007	83092 150 4500	DIODE 1N4148
IC 84001	83053 675 3000	IC TFMS5300 STEHEND/ TSOP
T 44011	83032 055 4800	TRANS BC548B
T 44013	83032 055 5800	TRANS BC558B
T 85000	83032 055 5800	TRANS BC558B
T 85005	83032 055 5800	TRANS BC558B

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 72010 800 0000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

⚠ (!)

The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010 800 0000, as well as the respective national deviations.

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Ersatzteilliste
Spare Parts List

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TV

ARGANTO 82 MW 82- 500 IRDT
ARGANTO 82 MW 82- 505 IRDT/DPL

VERSION NR./VERSION NO.: **VNM**

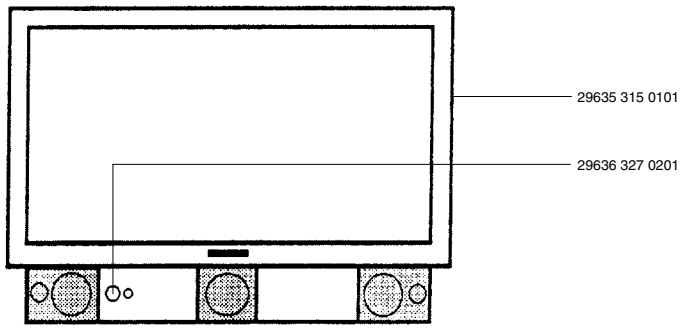
MATERIAL-NR. / PART NO.: 92182 763 5200 BESTELL-NR. / ORDER NO.: G.CI 37-52 GB POLAR
MATERIAL-NR. / PART NO.: 92182 764 5200 BESTELL-NR. / ORDER NO.: G.CI 38-52 GB POLAR

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		92182 763 5200		ARGANTO 82 MW 82-500 IRDT POLAR KEIN E-TEIL	ARGANTO 82 MW 82-500 IRDT POLAR NO SPARE PART
		92182 764 5200		ARGANTO 82 MW 82-505 IRDT/DPL POLAR KEIN E-TEIL	ARGANTO 82 MW 82-505 IRDT/DPL POLAR NO SPARE PART
0200.000		29635 315 0101		GEH-VORDERTEIL DRUCK KPL	CABINET FRONT PART PRINT
0240.000		29636 327 0201		TASTENKNOPF	KEY POWER
0252.000		29303 390 4200		KOPFHOERERBUCHSE 3,5 O.SCHALTER	HEADPHONE SOCKET 3,5 W/O SWITCH
0253.000		29303 168 5800		CINCH-BUCHSE 3-FACH RT=SCHALTER/WS/GE	CINCH SOCKET 3 FOLD RD=SWITCH/WH/YE
0255.000		29636 328 0203		TASTENSATZ	KEY SET
0256.000		29501 599 0102		ABDECKUNG S-BUCHSEN	COVER S-SOCKETS
0257.000		29636 439 0502		KLAPPE DRUCK KPL G.CI 37-52 GB	FLAP PRINT CPL G.CI 37-52 GB
0257.000		29636 439 0802		KLAPPE DRUCK KPL G.CI 38-52 GB	FLAP PRINT CPL G.CI 38-52 GB
0258.000		27033 221 0100		DRUCKSCHNAEPPER	PRESSURE CATCH
0259.000		29638 023 1301		DAEMPFUNGSBLOCK	DAMPING BLOCK
0260.000		29303 375 0101		DRAHTFEDER	WIRE SPRING
0264.000		19116 012 0200	2	LAUTSPRECHER	LOUDSPEAKER
0267.000		29608 864 0102	5	SOCKELEINLAGE	BASE INSERT
0269.000		29636 326 0202		IR-FENSTER	IR WINDOW
0279.000		29638 119 0101	2	SCHALLWAND	BAFFLE
0281.000		29636 504 0301		BEDIENUNGSEINSATZ DRUCK KPL.	CONTROL INSERT PRINT CPL
0300.000		29636 319 0601		GEH-RUECKTEIL KPL OFB MIT SUBWOOFER	REAR PANEL CPL SURF.TREAT WITH SUBWOOFER
0320.000		29618 821 0502		TYPENAUFKLEBER G.CI 37-52 GB	TYPE LABEL SELF-ADH. G.CI 37-52 GB
0320.000		29618 822 0502		TYPENAUFKLEBER G.CI 38-52 GB	TYPE LABEL SELF-ADH. G.CI 38-52 GB
0510.000		29636 324 0101		BOX-RUECKTEIL G.CI 38-52 GB	BOX REAR PART G.CI 38-52 GB
0520.000		29632 209 0202		GITTER KPL G.CI 38-52 GB	GRID CPL G.CI 38-52 GB
0530.000		19124 024 6100		LAUTSPRECHER G.CI 38-52 GB	LOUDSPEAKER G.CI 38-52 GB
0700.000	⚠	09246 152 8504		ENTMAGNETISIERUNGSSPULE M.HALTER	DEGAUSSING COIL W.HOLDER
1100.000		83000 760 2300		BILDR.W76EGV023X015 VIDEOCOLOR	PICT.TUBE W76EGV023X015 VIDEOCOLOR
1110.000		09647 889 0100		ABGLEICHELEMENT MAGNETSCHEIBE	ALIGNMENT PART MAGNETIC WASHER
1200.000		29201 474 0100		ANODENKABEL M.HS-KONDENSATOR	ANDODE CABLE WITH HS CONDENSER
1300.000		29501 083 8300		KEYBOARD KEIN E-TEIL	KEYBOARD NO SPARE PART
1310.000		29703 357 1100		TASTSCHALTER PROGRAMM +	KEY SWITCH PROGRAMME +
1320.000		29703 357 1100		TASTSCHALTER PROGRAMM -	KEY SWITCH PROGRAMME -
1330.000		29703 357 1100		TASTSCHALTER LAUTSTAERKE +	KEY SWITCH VOLUME +
1340.000		29703 357 1100		TASTSCHALTER LAUTSTAERKE -	KEY SWITCH VOLUME -
1360.000		29703 291 2205		NETZSCHALTER	POWER SWITCH
2100.000	⚠	82909 913 8600		NETZKABEL KPL GWN9.32 WF:	POWER CABLE CPL GWN9.32 W
2200.000		29305 160 6300		BUCHSENPLATTE CLICK FIT G.CI 38-52 GB	SOCKET BOARD CLICK FIT G.CI 38-52 GB
2300.000		29305 122 2500	X	BILDROHRPLATTE	PICTURE TUBE BOARD
2400.000		29642 061 1400		FERNBEDIENUNG TP 815 C	REMONTE CONTROL TP 815 C
2450.000	⚠	29607 307 0102	2	SCHLAUFE	LOOP
2470.000		81049 001 7000		FERRIT SFC-8 KITAGAWA	SPLITTOROIDAL CORES SFC-8 KITAGAWA
2480.000		81406 010 2000		SPERRFILTER SKF20	SUPPRESSION FILTER SKF20
		21827 941 0100		BEDIENUNGSANLEITUNG GB G.CI 37-52 GB	OPERATING INSTRUCT. GB G.CI 37-52 GB
		21827 941 0200		BEDIENUNGSANLEITUNG GB G.CI 38-52 GB	OPERATING INSTRUCT. GB G.CI 38-52 GB
		72010 025 9000		SERVICE MANUAL D/GB	SERVICE MANUAL D/GB
		29656 004 2700		MONTAGEZUBEHOER FUER BILDROHR KEIN E-TEIL	MOUNTING ACCESSORIES F.CRT NO SPARE PART

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29704 003 8800	X	CHASSIS-FS-STEREO G.CI 37-52 GB CUC 2058 D KEIN E-TEIL	CHASSIS TV STEREO G.CI 37-52 GB CUC 2058 D NO SPARE PART
		29704 003 8900	X	CHASSIS-FS-STEREO G.CI 38-52 GB CUC 2058 D KEIN E-TEIL	CHASSIS TV STEREO G.CI 38-52 GB CUC 2058 D NO SPARE PART
				X = SIEHE GESONDERTE E-LISTE	X = SEE SEPARATE PARTS LIST

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
D 85001	83099 783 7100	LE-DIODE LUB371GK SIE/ LT
D 85007	83092 150 4500	DIODE 1N4148
IC 84001	83053 675 3000	IC TFMS5300 STEHEND/ TSOP
T 44011	83032 055 4800	TRANS BC548B
T 44013	83032 055 5800	TRANS BC558B
T 85000	83032 055 5800	TRANS BC558B
T 85005	83032 055 5800	TRANS BC558B

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION



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⚠ (!)

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Spare Parts List

TV

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CHASSIS-FS-STEREO CUC 2058 D 16:9
CHASSIS-FS-STEREO CUC 2059 D 16:9

MATERIAL-NR. / PART NO.: 29704 003 8800/8900 (CUC2058D)
MATERIAL-NR. / PART NO.: 29704 003 8600/8700 (CUC2059D)

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29704 003 8800		CHASSIS-FS-STEREO CUC2058D 16:9 KEIN E-TEIL	CHASSIS TV STEREO CUC2058D 16:9 NO SPARE PART
		29704 003 8900		CHASSIS-FS-STEREO CUC2058D 16:9 KEIN E-TEIL	CHASSIS TV STEREO CUC2058D 16:9 NO SPARE PART
		29704 003 8600		CHASSIS-FS-STEREO CUC2059D 16:9 KEIN E-TEIL	CHASSIS TV STEREO CUC2059D 16:9 NO SPARE PART
		29704 003 8700		CHASSIS-FS-STEREO CUC2059D 16:9 KEIN E-TEIL	CHASSIS TV STEREO CUC2059D 16:9 NO SPARE PART
0100.000		29504 301 0100		TUNER-GLOBAL (PLL)	TUNER-GLOBAL (PLL)
0255.000		29303 119 6600	2	EURO-AV BUCHSENLEISTE 21-POL	EURO-AV SOCKET STRIP 21 P
0268.000		29700 639 1101		HALTER BAUSTEIN	HOLDER MODULE
0500.000		29305 129 0400	X	PANORAMA VIEW	PANORAMA VIEW
0600.000		29504 207 0100		IRDT/FTA-MODUL	IRDT/FTA-MODUL
0700.000		29504 104 8400	X	BAUSTEIN SUBWOOFER 8600/8800	MODULE SUBWOOFER 8600/8800
0800.000		29504 104 8500	X	BAUSTEIN DOLBY 8700/8900	MODULE DOLBY 8700/8900
0900.000		29305 129 0600	X	INTERFACE Y-UV PLATTE	INTERFACE Y-UV BOARD
1000.000	⚠	09621 113 0206	4	SICHERUNGSHALTER	FUSE HOLDER
2400.000	⚠	29303 399 5100		NETZ EINBAUGERAETESTECKER	APPLIANCE COUPLER W.CABLE
2410.000		29303 153 0107	2	MONTAGECLIP IC50020/T60006	MOUNTING CLIP IC50020/T60006
2420.000		29303 153 0200		MONTAGECLIP IC40000	MOUNTING CLIP IC40000
2430.000		29303 153 0208		MONTAGECLIP T53001	MOUNTING CLIP T53001
2440.000		29303 153 1208	3	MONTAGECLIP IC61040/61050/61060	MOUNTING CLIP IC61040/61050/61060
2450.000		29303 153 1605		MONTAGECLIP T55002	MOUNTING CLIP T55002
2470.000		29303 156 1801		FOLIE WAERMELEITEND T60006	FOIL HEAT CONDUCTING T60006
2480.000		29303 156 2000	2	FOLIE WAERMELEITEND IC61040/61050	FOIL HEAT CONDUCTING IC61040/61050

X = SIEHE GESONDERTE E-LISTE

X = SEE SEPARATE PARTS LIST

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
C 40012	84529 961 5000	ELKO 2200UF 20% 25V CB 8600/8700
C 40062	84529 961 8700	ELKO 1000UF 20% 35V CB 8900
C 40064	84529 961 8700	ELKO 1000UF 20% 35V CB 8900
C 40067	84529 961 8700	ELKO 1000UF 20% 35V CB 8900
C 40069	84529 961 8700	ELKO 1000UF 20% 35V CB 8900
C 53002	85159 117 0600	FOKO FKP1/4 0,0155UF 3,5%
C 53009	85159 116 0200	FOKO FKP1 142PF 2,5% 2000V
C 53072	85159 114 1300	FOKO FKP1 0,016UF 5% 400V
C 54002	86500 670 4600	HV-KERKO 100PF 20% 1KV
C 54011	86500 670 4600	HV-KERKO 100PF 20% 1KV
C 54012	84529 961 5500	ELKO 4700UF 20% 25V CB
C 60001	86500 811 2500	HV-KERKO 1000PF 20% 1KV
C 60002	85552 690 3500	FOKO KT/MKT 6 2700PF 5% 400V
C 60009	85159 116 0500	FOKO FKP1 220PF 5% 2000V
C 60023	86500 811 2500	HV-KERKO 1000PF 20% 1KV
C 60024	86500 811 2500	HV-KERKO 1000PF 20% 1KV
C 60026	86500 811 2500	HV-KERKO 1000PF 20% 1KV
C 60027	86500 811 2500	HV-KERKO 1000PF 20% 1KV
C 60038	85552 690 3700	FOKO KT/MKT 6 3300PF 5% 400V
C 61016	85159 110 3800	FOKO FKP1 100PF 10% 1600V

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
C 61026	86500 670 4600	HV-KERKO 100PF 20% 1KV
C 61036	86500 670 4600	HV-KERKO 100PF 20% 1KV
C 61037	84520 970 5700	ELKO 28 1000UF 63V
C 61056	86500 670 4600	HV-KERKO 100PF 20% 1KV
C 62021 ⚠	86600 982 3400	SI-KERKO B-SS 1000PF 20%
C 62022 ⚠	86600 982 3400	SI-KERKO B-SS 1000PF 20%
C 62048 ⚠	86600 982 3400	SI-KERKO B-SS 1000PF 20%
C 62501 ⚠	85117 930 1800	MP3 0,1UF 20% 250VW WIM/P
C 62502 ⚠	85117 930 1800	MP3 0,1UF 20% 250VW WIM/P
C 62505 ⚠	85637 324 2500	FOKO KF #25 0,1UF 20% 250V
CD 32411	83094 015 9200	SMD DIODE BA592 SIE/ BA78
CD 32421	83094 015 9200	SMD DIODE BA592 SIE/ BA78
CD 80007	83094 015 9200	SMD DIODE BA592 SIE/ BA78
CIC32410	83058 140 9400	SMD IC MC14094BD
CIC43050	83058 145 5100	SMD IC MC14551BD/R2 MOT A
CT 31005	83010 038 5800	SMD TRANS BC858B
CT 32105	83010 058 1700	SMD-TRANS.BC 817-25
CT 32111	83010 048 4800	SMD-TRANS.BC848B

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
CT 32119	83010 048 4800	SMD-TRANS.BC848B
CT 32122	83010 038 5800	SMD TRANS BC858B
CT 32123	83010 048 4800	SMD-TRANS.BC848B
CT 32124	83010 038 5800	SMD TRANS BC858B
CT 32132	83010 048 4800	SMD-TRANS.BC848B
CT 32308	83010 038 5800	SMD TRANS BC858B
CT 32310	83010 038 5800	SMD TRANS BC858B
CT 32312	83010 038 5800	SMD TRANS BC858B
CT 32315	83010 038 5800	SMD TRANS BC858B
CT 32318	83010 038 5800	SMD TRANS BC858B
CT 32415	83010 048 4800	SMD-TRANS.BC848B
CT 32430	83010 048 4800	SMD-TRANS.BC848B
CT 32431	83010 048 4800	SMD-TRANS.BC848B
CT 34031	83010 038 5800	SMD TRANS BC858B
CT 34075	83010 048 4800	SMD-TRANS.BC848B
CT 35484	83010 048 4800	SMD-TRANS.BC848B
CT 35671	83010 048 4800	SMD-TRANS.BC848B
CT 35681	83010 048 4800	SMD-TRANS.BC848B
CT 35691	83010 048 4800	SMD-TRANS.BC848B
CT 40059	83010 048 4800	SMD-TRANS.BC848B
CT 41022	83010 068 0800	SMD-TRANS.BC 808-40
CT 41030	83010 068 0800	SMD-TRANS.BC 808-40
CT 43095	83010 048 4800	SMD-TRANS.BC848B
CT 43246	83010 048 4800	SMD-TRANS.BC848B
CT 43255	83010 048 4800	SMD-TRANS.BC848B
CT 43289	83010 038 5800	SMD TRANS BC858B
CT 46004	83010 048 4800	SMD-TRANS.BC848B
CT 46009	83010 048 4800	SMD-TRANS.BC848B
CT 52253	83010 038 5800	SMD TRANS BC858B
CT 57005	83010 048 4800	SMD-TRANS.BC848B
CT 57020	83010 038 5800	SMD TRANS BC858B
CT 57021	83010 038 5800	SMD TRANS BC858B
CT 57112	83010 038 5800	SMD TRANS BC858B
CT 57113	83010 038 5800	SMD TRANS BC858B
CT 57124	83010 048 4800	SMD-TRANS.BC848B
CT 61043	83010 048 4800	SMD-TRANS.BC848B
CT 61053	83010 048 4800	SMD-TRANS.BC848B
CT 81058	83010 048 4800	SMD-TRANS.BC848B
CT 81091	83010 048 4800	SMD-TRANS.BC848B
CT 81508	83010 048 4800	SMD-TRANS.BC848B
CT 81511	83010 038 5800	SMD TRANS BC858B
D 31001	83097 030 3300	Z-DIODE ZPY33 2%/ BZX85B3
D 31007	83097 200 4800	Z DIODE 4,7 C 0,5W
D 40064	83092 150 4500	DIODE 1N4148
D 40066	83092 150 4500	DIODE 1N4148
D 50011	83097 205 1000	Z DIODE 51 C 0,5W
D 50013	83092 150 2000	DIODE 1 N 4004 -GA
D 50014	83092 150 4500	DIODE 1N4148
D 52001	83092 150 4500	DIODE 1N4148
D 53003	83092 010 0500	DIODE BA157
D 53071 ⚠	83092 042 2800	DIODE BY228 PHI/GI/TFK
D 53072 ⚠	83092 101 4400	DIODE BYW76 TEMIC/ MR858
D 54001 ⚠	83092 042 6800	DIODE BYV16 TEMIC/ BYV96E
D 54002	83095 162 8300	DIODE BYV 28-200 RA 12,5/
D 54011	83095 162 8300	DIODE BYV 28-200 RA 12,5/
D 57011	83092 150 4500	DIODE 1N4148
D 57012	83092 150 4500	DIODE 1N4148
D 57013	83092 150 4500	DIODE 1N4148
D 57014	83092 150 4500	DIODE 1N4148
D 57023	83092 150 4500	DIODE 1N4148
D 57101	83091 985 4200	DIODE BAT42/43/BAT85/86 A
D 57122	83092 150 4500	DIODE 1N4148
D 60005	83092 000 2100	DIODE BAV21 ITT/ TFK
D 60006	83095 168 5400	DIODE BYT 54 M GEG.N.AV 6
D 60007	83095 168 5400	DIODE BYT 54 M GEG.N.AV 6
D 60012	83092 000 2100	DIODE BAV21 ITT/ TFK
D 60023	83085 603 8400	GLR.SKB380C1500/ FBI2L52-
D 60037	83092 000 2100	DIODE BAV21 ITT/ TFK
D 61016 ⚠	83092 115 0800	DIODE SF5408 VIS

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
D 61036	83098 208 4000	DIODE MUR 840/BYV 29-400/
D 61056 ⚠	83095 171 7200	DIODE BYW172D TEMIC/ FUF5
D 81020	83092 150 4500	DIODE 1N4148
F 32101	81411 124 0500	FILTER 7X7 405 SIGN 11240
F 32109	86027 550 4200	CER.TRAP 42
F 32121	81411 113 6000	FILTER 7X7 360 SIGN 11136
F 32410	81411 076 0000	SPULE 7X7 #600 FARBE342 3
F 32412	83190 034 5200	OFWFIL K3453K/ K3452K S
IC 32000	83054 334 1100	IC MSP3410D-PO-B4
IC 32930	83051 474 1900	IC DPL3519A-PO-A2 DIP 52 8900
IC 34015	83053 388 4300	IC TDA8843N2S1
IC 40000	83053 672 9700	IC TDA7297
IC 40070	83053 372 6500	IC TDA7265 SGS 8700/8900
IC 40080	83053 372 6500	IC TDA7265 SGS 8700/8900
IC 43280	83053 664 2500	IC TEA6425 SGS
IC 50020	83053 383 5000	IC TDA8350Q/N6
IC 60010	83053 546 0500	IC TDA4605/3
IC 61040	83052 043 1700	IC LM317T NSC/MOT/SGS
IC 61050	83052 043 1700	IC LM317T NSC/MOT/SGS
IC 61060	83052 057 0300	IC MC7805CT
IC 61310	83052 043 5700	IC LM358N NSC/TID/MOT/RAY
IC 80000	83052 100 6500	IC MC33164P-5RP
IC 81050	29325 219 1300	PROZESSORPLATTE
IC 82005	83051 240 0800	IC M24C08B1/ M24C08-BN6
L 31043	81405 264 4000	DR ST 0411-GRP 8,2UH 10%
L 32023	81405 264 1900	DR AX 0411-GA 1UH 10%
L 32026	81405 260 3400	DR 0309 10UH 5%
L 32109	81405 264 4400	DR ST 0309-GRP 10UH 5%
L 32342	81405 052 4900	DR A AX-GA 10UH 10%
L 40002	81405 052 4900	DR A AX-GA 10UH 10% 8700/8900
L 43098	81405 117 4800	DR 0411 22UH 10%
L 46022	81405 264 5800	DR 0309 2,7UH 5%
L 53001	81049 820 5600	FERRITPERLE HF70 BTL 3,5X
L 53002	81049 820 5600	FERRITPERLE HF70 BTL 3,5X
L 53003	81049 820 5600	FERRITPERLE HF70 BTL 3,5X FERRITE BEAD
L 53011	81405 052 4900	DR A AX-GA 10UH 10%
L 53012	09240 110 5100	DROSSEL 2,2 MH/CHOKE COIL
L 53021	29203 110 9500	LINEARITAETSREGLER (110) LINEARITY CONTROL
L 53074	09246 846 5600	BRUECKENSPULE (110) BRIDGE COIL
L 55006	09245 816 0100	O/W AUSKOPPELSPULE E/W DECOUPLING COOIL
L 60006	81049 820 5700	FERRITPERLE 3,6UH 5720500 FERRITE BEAD
L 60012	81049 820 1400	DAEMPF-PERLE 433003038102
L 61016	81049 820 1400	DAEMPF-PERLE 433003038102
L 61026	81049 820 1400	DAEMPF-PERLE 433003038102
L 61036	81049 820 1400	DAEMPF-PERLE 433003038102
L 61056	81049 820 1400	DAEMPF-PERLE 433003038102 DAMPPING BEAD
L 62501 ⚠	29500 825 9700	ENTSTOER-DR/CHOKE COIL
L 81062	81049 820 5100	FERRITPERLE HF55 BTL 3,5X FERRITE BEAD
OK 60031 ⚠	83060 000 1200	OPTOKOPPLER CNY17F1/ CNY1
Q 20093	83821 620 4100	QUARZ 4 MHZ LNG8-638 NDK
Q 32305	83824 391 8600	QUARZ #439-9 18,432MHZ 12
Q 34043	83821 360 0400	QUARZ #136 2A 4,433619MHZ
Q 40012	83824 391 8600	QUARZ#439-9 18,432MHZ 12 8700/8900
R 21117 ⚠	87053 690 1300	MOW 0617 3,3 OHM 5%
R 32359 ⚠	87003 290 4700	KSW NB 0207 82 OHM 5%

POS. NR. / POS. NO.		MATERIAL-NR. / PART NUMBER	BEZEICHNUNG / DESCRIPTION
R 40012	⚠	87322 960 1100	DRW 6,5 2,7 OHM 10%
R 40037	⚠	87011 210 2500	KSW SI B 10 OHM 5% 8700/8900
R 40061	⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5% 8700/8900
R 40063	⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5% 8700/8900
R 40066	⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5% 8700/8900
R 40068	⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5% 8700/8900
R 40106	⚠	87322 919 8600	DRW 4 0,27 OHM 10% 8700/8900
R 43098	⚠	87011 190 2100	KSW SI B 6,8 OHM 5%
R 50011	⚠	87011 210 3700	KSW SI B 33 OHM 5%
R 50021	⚠	87663 274 0500	MSW 0207 1,5 OHM 1%
R 50022	⚠	87663 272 0700	MSW 0207 1,8 OHM 2%
R 50024	⚠	87663 570 5700	MSW 0414 220 OHM 5%
R 52004	⚠	87053 290 3300	MOW 0411 27 OHM 5%
R 53001	⚠	87004 290 2300	KSW NB 0207 8,2 OHM 5%
R 53002	⚠	87004 290 9700	KSW NB 0207 10 KOHM 5%
R 53011		87052 270 2100	MOW 0411 6,8 OHM 5%
R 53016	⚠	87301 792 2100	DRW 7 6,8 OHM 10%
R 53021	⚠	87053 290 7100	MOW 0411 820 OHM 5%
R 54001	⚠	87053 290 2700	MOW 0411 12 OHM 5%
R 54003	⚠	87003 290 0900	KSW NB 0207 2,2 OHM
R 54012	⚠	87350 032 0100	DRW 0,75W 1 OHM 10%
R 55006	⚠	87012 308 1700	NKS 3 4,7 OHM 5%
R 60008	⚠	87053 691 0500	MOW 0617 22 KOHM 5%
R 60009	⚠	87053 691 0500	MOW 0617 22 KOHM 5%
R 60016	⚠	87053 690 4300	MOW 0617 56 OHM 5%
R 60021		83110 050 1700	NTC 4,7 OHM 30%
R 60029	⚠	87053 693 1900	MOW 0617 82 KOHM 10%
R 61019	⚠	87001 213 3300	KSW 0207 330 KOHM 5%
R 61313		87900 500 5400	ESTR.SK10-A 22 KOHM LIN
R 62049	⚠	87663 491 6100	MSW SI 0414 4,7 MOHM 5%
R 62505	⚠	83112 000 1200	PTC #3 DUO
SI 40012	⚠	83156 190 2800	SI LOET T1,6A 250V
SI 40070	⚠	83156 210 2700	SI LOET T2,5A 250V
SI 52001	⚠	83156 120 2700	SI LOET T315MA 250V
SI 60001	⚠	83156 190 0300	SI 5X20 T1,6A L 250V
SI 61026	⚠	83156 230 0800	SI LOET T4A 250V
SI 61036	⚠	83156 240 0100	SI LOET T 5A 250V
SI 61056	⚠	83156 210 2700	SI LOET T2,5A 250V
SI 62501	⚠	83156 170 0600	SI 5X20 T2,5A L 250V
T 40105		83022 170 9500	TRANS BDW94B STM 8700/8900
T 52001		83032 856 3700	TRANS.BC 637
T 53001		83029 000 1900	TRANS S2000N TOS
T 55002		83029 901 2000	TRANS STP10NB20FP SGS
T 60006		83028 050 5000	TRANS IRFPC50 IRF/ 2SK26
T 61301		83032 055 4800	TRANS BC548B
TR 52001		09246 866 0400	TRAFO TREIBER DRIVER TRANSFORMER
TR 53010	⚠	29221 029 6300	TRAFO DIODEN-SPLIT (110) DIODE SPLIT TRANSFORMER
TR 61000	⚠	29201 344 9701	TRAFO SPERRWANDLER B.O.-TYPE CONVERTER TRANSFORMER

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Ersatzteilliste
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BILDROHRPLATTE
PICTURE TUBE BOARD

MATERIAL-NR. / PART NO.: 29305 122 2500

POS. NR. / POS. NO.	ABB. / FIG.	MATERIAL-NR. / PART NUMBER	ANZ. / QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29305 122 2500		BILDROHRPLATTE	PICTURE TUBE BOARD
0010.000	⚠	29303 752 9500		BILDROHRFASSUNG	CRT SOCKET
0020.000	⚠	29201 361 1800		FOKUS U.UG2-REGLER	FOCUS AND UG2-CONTROLLER

POS. NR. / POS. NO.		MATERIAL-NR. / PART NUMBER	BEZEICHNUNG / DESCRIPTION
C 21504		85637 316 1200	KF 21 0,01 UF 20% 1500V
D 21502		83092 150 2000	DIODE 1 N 4004 -GA
L 24001		81405 260 2200	DR AX 0309-GA 22UH 5%
R 21502		87000 113 6100	KSW 0204 4,7 MOHM 5%
R 24021		87650 965 0200	MSW 0204 16 KOHM 1%
R 24081	⚠	87004 290 4700	KSW NB 0207 82 OHM 5%
T 21510		83034 012 9900	TRANS.BF299 G ITT/PBF259
T 21515		83032 055 5800	TRANS BC558B
T 22023		83032 035 5800	TRANS BC558A

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INTERFACE Y-UV PLATTE
INTERFACE Y-UV BOARD

MATERIAL-NR. / PART NO.: 29305 129 0600

POS. NR. / POS. NO.	ABB. / FIG.	MATERIAL-NR. / PART NUMBER	ANZ. / QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29305 129 0600		INTERFACE Y-UV PLATTE	INTERFACE Y-UV BOARD

POS. NR. / POS. NO.	MATERIAL-NR. / PART NUMBER	BEZEICHNUNG / DESCRIPTION
CD 35483	83250 041 4800	SMD DIODE LS 4148
CD 35671	83250 041 4800	SMD DIODE LS 4148
CD 35681	83250 041 4800	SMD DIODE LS 4148
CD 35691	83250 041 4800	SMD DIODE LS 4148
CT 35483	83010 038 5800	SMD TRANS BC858B
CT 35484	83010 048 4800	SMD-TRANS.BC 848 B
CT 35671	83010 048 4800	SMD-TRANS.BC 848 B
CT 35672	83010 038 5800	SMD TRANS BC858B
CT 35681	83010 048 4800	SMD-TRANS.BC 848 B
CT 35682	83010 038 5800	SMD TRANS BC858B
CT 35691	83010 048 4800	SMD-TRANS.BC 848 B
CT 35692	83010 038 5800	SMD TRANS BC858B
CT 35700	83010 038 5800	SMD TRANS BC858B

POS. NR. / POS. NO.	MATERIAL-NR. / PART NUMBER	BEZEICHNUNG / DESCRIPTION

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PANORAMA VIEW

MATERIAL-NR. / PART NO.: 29305 129 0400

POS. NR. / POS. NO.	ABB. / FIG.	MATERIAL-NR. / PART NUMBER	ANZ. / QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29305 129 0400		PANORAMA VIEW	PANORAMA VIEW

POS. NR. / POS. NO.	MATERIAL-NR. / PART NUMBER	BEZEICHNUNG / DESCRIPTION
OK 64103	83060 000 1200	OPTOKOPPLER CNY17F1/ CNY1
T 05008	83029 907 2000	TRANS STP10NB20/ STP7N20
T 64101	83032 055 4800	TRANS BC548B

POS. NR. / POS. NO.	MATERIAL-NR. / PART NUMBER	BEZEICHNUNG / DESCRIPTION

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BAUSTEIN SUBWOOFER
MODULE SUBWOOFER

MATERIAL-NR. / PART NO.: 29504 104 8400

POS. NR. / POS. NO.	ABB. FIG.	MATERIAL-NR. / PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29504 104 8400		BAUSTEIN SUBWOOFER	MODULE SUBWOOFER
2410.000		29303 156 3101		FOLIE WAERMELEITEND IC40200	FOIL HEAT CONDUCTING IC40200

POS. NR. / POS. NO.	MATERIAL-NR. / PART NUMBER	BEZEICHNUNG / DESCRIPTION
D 40213	83097 200 4300	Z DIODE 4,3 C 0,5W
D 40225	83092 150 4500	DIODE 1N4148
D 40226	83091 985 4200	DIODE BAT42/43/BAT85/86 A
IC 40200	83053 372 6500	IC TDA7265 SGS
R 40241 ⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40242 ⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40258 ⚠	87322 919 9600	DRW 4 0,68 OHM 10%
T 40215	83032 055 4800	TRANS BC548B
T 40220	83032 055 4800	TRANS BC548B
T 40225	83032 055 4800	TRANS BC548B
T 40250	83032 055 4800	TRANS BC548B
T 40255	83022 180 5400	TRANS.BDX 54 A/B/C

POS. NR. / POS. NO.	MATERIAL-NR. / PART NUMBER	BEZEICHNUNG / DESCRIPTION

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BAUSTEIN DOLBY
MODULE DOLBY

MATERIAL-NR. / PART NO.: 29504 104 8500

POS. NR. / POS. NO.	ABB. FIG.	MATERIAL-NR. / PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29504 104 8500		BAUSTEIN DOLBY	MODULE DOLBY
1310.000		29303 156 3101	3	FOLIE WAERMELEITEND IC40070/40080/40200	FOIL HEAT CONDUCTING IC40070/40080/40200

POS. NR. / POS. NO.	MATERIAL-NR. / PART NUMBER	BEZEICHNUNG / DESCRIPTION
C 40037	84151 661 0600	ELKO 1000UF 20% 16V
C 40109	84529 961 9000	ELKO 2200UF 20% 35V
C 40110	84529 961 9000	ELKO 2200UF 20% 35V
C 40211	84529 961 9000	ELKO 2200UF 20% 35V
CT 40015	83010 038 5800	SMD TRANS BC858B
CT 40020	83010 038 5800	SMD TRANS BC858B
CT 40025	83010 038 5800	SMD TRANS BC858B
CT 40030	83010 038 5800	SMD TRANS BC858B
CT 40101	83010 058 1700	SMD-TRANS.BC 817-25
CT 40215	83010 048 4800	SMD-TRANS.BC 848 B
CT 40220	83010 048 4800	SMD-TRANS.BC 848 B
CT 40225	83010 048 4800	SMD-TRANS.BC 848 B
D 40213	83097 200 4300	Z DIODE 4,3 C 0,5W
D 40224	83092 150 4500	DIODE 1N4148
D 40226	83091 985 4200	DIODE BAT42/43/BAT85/86 A
IC 32930	83051 474 1900	IC DPL3519A-PO-A2 DIP52
IC 40070	83053 372 6500	IC TDA7265 SGS
IC 40080	83053 372 6500	IC TDA7265 SGS
IC 40200	83053 372 6500	IC TDA7265 SGS
L 40002	81405 052 4900	DR A AX-GA 10UH 10%
Q 40012	83824 391 8600	QUARZ #439-9 18,432MHZ 12
R 40037 ⚠	87011 210 2500	KSW SI B 10 OHM 5%
R 40061 ⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40063 ⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40066 ⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40068 ⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40106 ⚠	87322 919 8600	DRW 4 0,27 OHM 10%
R 40241 ⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40242 ⚠	87004 290 1700	KSW NB 0207 4,7 OHM 5%
T 40105	83022 170 9500	TRANS BDW94B STM

POS. NR. / POS. NO.	MATERIAL-NR. / PART NUMBER	BEZEICHNUNG / DESCRIPTION

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